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## CONTENTS

### SHOULD TERMINAL DISINFECTION BE ABOLISHED?

- ASSISTANT SURGEON GENERAL R. H. CREEL, U. S. P. H. S., Washington, D. C. ....270  
LINSLEY R. WILLIAMS, M. D., Albany, N. Y. ....271  
H. W. HILL, M. D., London, Can. ....272  
CHARLES S. CAVERLY, M. D., Rutland, Vt. ....272  
JOHN DILL ROBERTSON, M. D., Chicago, Ill. ....272  
JOSEPH S. NEFF, M. D., Philadelphia. ....272

### GENERAL SCIENTIFIC.

- The Vagaries of Boards of Health. ....273  
REYNOLD WEBB WILCOX, M. D., New York.  
The Clinical Diagnosis of Syphilis. ....274  
HENRY H. MORTON, M. D., Brooklyn.  
The Detection and Control of Typhoid Carriers of Disease ....278  
F. M. MEADER, M. D., Albany, N. Y.

- The Menace of the Biting Stable Fly. ....279  
JACQUES W. REDWAY, F. R. G. S., Mount Vernon, N. Y.  
Food and Feeding in Infancy. ....280  
J. EPSTEIN, M. D., New York.  
Undiluted Citrated Milk in Feeding of Infants ....281  
EARL M. SMITH, M. D., Amsterdam, N. Y.  
Cancer of the Rectum ....282  
WILLIAM FRANCIS CAMPBELL, M. D., Brooklyn.  
On the Need of an American Association of General Practitioners ....283  
EDWIN A. SANBORN, M. D., Somerville, Mass.  
A Few Observations on Cerebro-spinal Fluid in Poliomyelitis ....287  
JACOB DINER, M. D., New York.

### THE DIAGNOSTIC LABORATORY

- AM. ASSN. CLINICAL RESEARCH ....286

### GENITO-URINARY SURGERY 287 DIAGNOSIS AND TREATMENT ....289

### EDITORIAL.

- What is the Causative Agent of Poliomyelitis? ....291  
The American Association of General Practitioners ....291  
The Real Import of Genius Plus or Minus Humor ....292  
The Virtues of Alcohol ....292  
A New Contributing Editor ....293

### MISCELLANY.

- An Epidemic Which We Apparently Do Not Fear ....294  
A Paradox ....294  
"Logic is Logic" ....294  
A New Line of Cleavage in Practice. ....294  
Confusion Worse Confounded. ....294  
The Lurking Fallacy in Intelligence Tests. ....294  
A Good Word for a Quack. ....294

### CORRESPONDENCE .....295 THE PHYSICIAN'S LIBRARY 295

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## Should Terminal Disinfection Be Abolished?

In the discussion of this subject physicians will naturally be interested to know the attitude taken by the officials in the Department of Health of New York. The officials have been so busily engaged in fighting the great epidemic of acute poliomyelitis that they have been unable to prepare a paper for THE MEDICAL TIMES, but have sent, as their contribution to this symposium, the data issued by the department at the time terminal fumigation was discontinued and it is submitted herewith.

The discontinuance of fumigation on October 8, 1914, in the boroughs of The Bronx, Queens and Richmond, as a routine method of disinfection after the major acute infectious diseases was not followed by any increased prevalence of diphtheria, scarlet fever or measles. On January 1, 1915, such fumigation

was also discontinued in the Borough of Manhattan, but continued in the Borough of Brooklyn for purposes of control, and in order to test the efficiency and value of fumigation.

It should be understood that in discontinuing fumigation the Department of Health has laid increased stress upon other and more efficient methods of disinfection, viz., thorough cleaning, fresh air and sunlight, and particularly renovation (i. e., re-painting and re-papering) when necessary. Prior to the discontinuance of fumigation, no such renovations were enforced in any of the infectious diseases except tuberculosis. During the first five months of 1915, 10,785 such renovations, in addition to those for tuberculosis, were ordered and carried out.

That the Department of Health was justified in its action is shown by the figures. There has been no increase in the prevalence of the various diseases; better and more efficient disinfection has been performed and the saving to the city has been at the rate of about \$30,000 a year.

### Later Cases of Diphtheria and Scarlet Fever—1st Five Months of 1915.

January 1st, 1915, to May 31st, 1915.	Manhattan.		The Bronx.		Brooklyn		Queens.		Richmond.	
	Dip.	S. F.	Dip.	S. F.	Dip.	S. F.	Dip.	S. F.	Dip.	S. F.
<i>Original cases</i> .....	3,451	3,331	841	950	2,907	2,206	332	522	67	92
Fumigation by Department.....	4	7	....	....	692	1,825	....	1	....	....
Fumigation by physicians.....	42	89	8	12	25	36	75	....	....	....
Fumigation omitted.....	10	3	64	98	367	344	33	10	2	6
Cleaning.....	3,395	3,232	767	838	1,848	12	252	374	65	86
Renovation.....	....	....	2	2	....	....	11	62	....	....
<b>Total</b> .....	<b>3,451</b>	<b>3,331</b>	<b>841</b>	<b>950</b>	<b>2,907</b>	<b>2,206</b>	<b>332</b>	<b>522</b>	<b>67</b>	<b>92</b>
<i>Later cases</i> .....	193	263	73	118	138	156	43	78	8	16
Class "A".....	171	229	57	101	110	134	35	76	8	16
Class "B".....	22	34	16	17	28	22	8	2	....	....
<b>Termination.</b>										
Class "A".....										
Fumigation by Department.....	....	2	....	....	21	134	....	....	....	....
Fumigation by physicians.....	2	18	....	....	....	....	....	....	....	....
Fumigation omitted.....	33	43	....	....	....	....	8	40	1	1
Cleaning.....	136	164	57	101	84	....	22	26	7	15
Renovation.....	....	2	....	....	5	....	5	10	....	....
<b>Total</b> .....	<b>171</b>	<b>229</b>	<b>57</b>	<b>101</b>	<b>110</b>	<b>134</b>	<b>35</b>	<b>76</b>	<b>8</b>	<b>16</b>
<b>Class "B".....</b>										
Fumigation by Department.....	....	....	....	....	17	22	....	....	....	....
Fumigation by physicians.....	....	5	....	....	....	....	....	....	....	....
Fumigation omitted.....	3	....	....	....	....	....	4	1	....	....
Cleaning.....	17	29	16	17	11	....	4	1	....	....
Renovation.....	2	....	....	....	....	....	....	....	....	....
<b>Total</b> .....	<b>22</b>	<b>34</b>	<b>16</b>	<b>17</b>	<b>28</b>	<b>22</b>	<b>8</b>	<b>2</b>	<b>....</b>	<b>....</b>

Key—

Class "A"—Includes the number of cases developing *before or within* 5 days after date, fumigation was or would have been performed.

Class "B"—Includes the number of cases developing *more than* 5 days after date fumigation was or would have been performed.



A table showing the number of later cases of diphtheria and scarlet fever occurring in the City of New York during the first five months of the year 1915 is attached. By later cases are meant those occurring twenty-four hours or more after the onset of the original case. These later cases are sub-divided into A—those which would not have been prevented by terminal or other disinfection, the individual being already infected before the original one had recovered; and B—those cases in which infection might have been prevented had efficient disinfection been performed. The various methods of disinfection used are given under the total number of original cases, and also under the two classes of later cases. It will be at once noted that terminal fumigation in cases of diphtheria and scarlet fever in the Borough of Brooklyn has not resulted in a decreased prevalence of those diseases as compared with other boroughs.

In the Borough of Manhattan 193 later cases occurred among 3,451 primary cases of diphtheria (5.6%). Of these 171, or 4.9% would not have been affected by fumigation, and 22, or 0.6%, might have been so affected.

In Brooklyn, where fumigation was performed, there was 138 later cases among 2,907 original cases (4.7%). Of these, 110, or 3.8%, would not have been affected by fumigation, and 28, or 0.9%, might have been so affected. In other words, there were half again as many later cases in Brooklyn, where fumigation was done, as in Manhattan, where it was not done.

In the case of scarlet fever the number of possibly preventable later cases was practically the same in the two boroughs, viz., 1.0% and .99% respectively. In Manhattan 263 later cases occurred among 3,331 original cases (7.8%). Of these, 229, or 6.8%, would not have been affected by fumigation; 34, or 1.0%, might have been so affected. In Brooklyn 156 later cases occurred among 2,206 original cases (7.0%). Of these, 134, or 6.0%, would not have been affected by fumigation, and 22, or 0.99%, might have been so affected.

These figures show that the discontinuance of fumigation in diphtheria and scarlet fever in the boroughs of Manhattan, The Bronx and Richmond has not been followed by any harmful effects. Terminal fumigation in infectious diseases will therefore be discontinued at once in the Borough of Brooklyn.

### SHOULD TERMINAL DISINFECTION BE ABOLISHED?

ASSISTANT SURGEON-GENERAL R. H. CREEL,

U. S. P. H. S.,  
Washington, D. C.

Any rational opinion on this subject is more or less dependent upon a consideration of the purpose of disinfection—the object sought to be accomplished thereby.

Following the demonstration of bacterial infection as the pathogenesis of various diseases and the proven value of locally applied antiseptics, the employment of house disinfection increased in usage for many years, and it is only recently that the pendulum of opinion has commenced to swing in the opposite direction.

The practice was predicated on the assumption of place infection and transmission of virus through the air and by fomites. This assumption contemplated that pathogenic organisms, as a class, retain both viability and virulence when discharged from the body of the patient—a theory that has been disproven in many instances.

It is definitely proven that various of these organisms have but feeble resistance to physical conditions, such as sunlight, absence of moisture, aeration, temperature changes and the antagonistic influence of harmless saprophites. Their existence outside the body is of such a brief period as to obviate the necessity of artificial agents for destruction.

Thus one of the main arguments for disinfection is disposed of.

Associated with the theory of longevity of bacteria was the hypothesis of aerial transmission. Later investigations exploded this theory in connection with a number of diseases, and established the fact that transmission occurred through insect carriers (mosquitoes, fleas, lice, ticks, etc.), or by ingestion of polluted food or drink (cholera, typhoid and dysenteries), and to this

extent there was another shrinkage in the number of diseases whose dissemination was thought to be controlled or affected by place disinfection.

Thereafter foci of insect-borne diseases were treated by insecticides or fumigants lethal to insect life, instead of the previously used bactericides, or, as in cholera or typhoid, the disinfection and disposal of excreta was considered. Again, the spread of diphtheria, cerebro spinal meningitis, pertussis and similar communicable diseases can very satisfactorily be explained by the assumption of direct contact or intimate association with the sick or a convalescent or passive carrier.

As a matter of fact, the practice of terminal disinfection has been discarded in proportion to our increasing knowledge of epidemiology. The past employment of disinfection in many instances was empirical.

For lack of more definite knowledge, the theory of place infection was plausible, and the enforcement of disinfection was not objectionable to a health officer who, perforce, "had to do something" to allay alarm and impress that public that he was not indifferent to his responsibilities.

Based largely on the assumption of place infection, the procedure has been employed in many instances without knowledge of the causative factor of the disease being combatted, and when used to control dissemination of infection, the specific organism of which had been identified, no thought was given as to the viability of the virus outside the body or that it might be of such short duration as to render unnecessary its destruction by artificial measures.

In the light of our modern conception of epidemiology, there can be no doubt that our former confidence in the effectiveness of disinfection was sadly misplaced. The practice of terminal disinfection, therefore, has steadily decreased, until now it is advocated only by those who believe that it may have some efficacy in preventing the spread of exanthemata or other diseases, such as poliomyelitis, the epidemiologic factors of which are not fully understood and the specific organisms of which have not been isolated.

The observations of various European investigators, and that of Chapin and various others in this country, as to the results of non-isolation of patients suffering from the different exanthematous fevers casts very serious doubts on the probability of these infections being air-borne.

Very true, it would require a courageous official to purposely omit disinfection of a smallpox habitation, and yet the practice can only be defended on the ground that its ineffectiveness has not been proven.

Granted, for the sake of argument, that the virus of some of the diseases whose pathogenesis is as yet unknown, or the known organisms of such diseases as diphtheria or pertussis may retain their viability after discharge from the body, the question arises as to what extent they are subject to the effect of the disinfectants most commonly used.

As a rule, either a gaseous disinfectant, such as formaldehyde or sulphur dioxide, or one of the various bacteriacidal solutions is used, the latter being sprayed.

These gases have only a superficial action and no power of penetration, and so it is highly probable that the discharged virus, protected by dust and organic matter (mucous, epithelia, etc.), would to a great extent escape destruction. Furthermore, the limited diffusibility of these gases, more especially sulphur dioxide, restricts their usefulness in disinfection of bed clothes and fabrics.

In practice, the solutions that are sprayed disinfect only in spots and are rarely applied to the entire surface



of the room. Thorough treatment by solutions would entail the flooding of the floor space, the drenching of the walls, and the soaking of draperies, rugs, carpets, matting and furnishings in general—an impractical procedure. Renovation, including repapering, repainting or calsonining would be easier of accomplishment. In the face of unproven necessity, such treatment could hardly be considered justifiable. It would only be within the bounds of prudence to have bed clothes of patients sick of measles, scarlet fever, etc., well boiled before being laundered, since this would not entail any administrative expense, although, insofar as the writer is aware, the ineffectivity of these articles has not been demonstrated.

Even if it is conceded that the discharged virus or organisms do not succumb, but remain pathogenic, the question arises as to what persons are protected by terminal disinfection.

The majority of cases of infectious diseases have already developed active symptoms when discovered, and the immediate family or associates, whom disinfection is intended to protect, have already been exposed and have demonstrated their susceptibility or resistance, as the case may be.

Aside from the family or intimate associate, the casual caller might be considered; but, ordinarily, the latter is not brought into close or prolonged contact with the supposedly infected place.

Terminal disinfection, therefore, has a proven value only in the treatment of foci or insect-borne diseases. Efficient fumigation by cyanide gas or sulphur fumes is worth while in destroying infected insects; but even in these diseases (plague, typhus, yellow fever, etc.) disinfection can only be considered as an auxilliary measure in effecting eradication.

For the general run of communicable diseases, the benefit derived from the treatment of supposedly infected places has not been proven, and may be considered as objectionable by reason of entailing an unnecessary expense on an inadequately funded health organization, and thereby obstruct the application of more useful measures.

The control and treatment of carriers and the observation of contacts may strain the resources of most public health bodies, without the distraction of enforcing measures of questionable value.

The health organization in this country that cannot utilize all of its available funds, and more too, is an exception, if indeed such exists, and so haphazard procedures such as terminal disinfection can well be dispensed with, especially as its application not only may entail a needless expense, but may inspire a sense of false security with resultant disregard of important safeguards.

One can not be too radical in condemning a time-honored practice, but it would seem sufficiently conservative to counsel the discontinuance of terminal disinfection until its value is proven and not merely based on conjecture, bearing in mind, of course, that foci of insect-borne diseases should be fumigated for destruction of insect life.

#### TERMINAL FUMIGATION.

LINSLEY R. WILLIAMS, M.D.,

DEPUTY COMMISSIONER, NEW YORK STATE DEPARTMENT OF HEALTH,  
Albany, N. Y.

Modern bacteriology and scientific investigation has taught many new facts on the behavior and life of the causative agents of the various infectious diseases. The measures taken will be successful when this modern knowledge is scientifically applied. Up to very recent

times, and even now in some circles, it was believed that articles infected or contaminated by persons ill with a contagious disease were the chief agents in transmitting the disease, and efforts were made at the total destruction of infected articles spoken of as fomites, or at the destruction of the contagion by fumigation or disinfection, which terms were used interchangeably and without due regard to their meaning.

It should be remembered that disinfection implies the destruction of the infective agent and fumigation the making of a smoke and it has unfortunately been assumed that the production of other gases of known disinfecting value was the production of an efficient disinfectant. In 1804 a Philadelphia observer, in an article in the *Medical Times*, recommends the use of nitrous oxide gas for fumigation coupled with soap, water and airing and commends its value in fumigating the hold of a ship and other places in preventing typhus fever. In commenting on this method the editor speaks of the effective value of soap and water and fresh air without the nitrous oxide and states definitely that experience has shown that this latter method is equally effective in limiting the spread of typhus.

In 1893 Biggs and Doty experimented with various methods of fumigation for the disinfection of rags imported from Europe where a cholera epidemic existed in many places. It was found by bacteriological test that live steam under pressure injected into the bale penetrated but a short distance from the point of introduction and that other methods of gaseous disinfection had an insufficient penetrating power to be of value. Sanitarians continued to fumigate the fomites of yellow fever when it was generally accepted in districts where yellow fever was endemic that it was only rarely contagious. When the definite mode of transmission became known fumigation and disinfection were totally abolished.

A more complete knowledge of the life history of various pathogenic bacteria teaches us that typhoid fever may be eliminated if the excreta of all cases and carriers be disinfected at the time of discharge. This is efficient disinfection and not terminal disinfection or fumigation. The same is true of tuberculosis.

The same is true of diphtheria and in small communities where all affected persons may be controlled and exposed persons kept under surveillance the epidemic kept under surveillance the epidemic is limited by the detention of all convalescents until the laboratory reports the throats free from bacilli. Unfortunately, many cases are undetected and diagnosed as tonsillitis, follicular or diphtheritic. These are the "missed cases" that are largely responsible for the epidemic.

The life history of this bacillus shows that it needs warmth and moisture for growth or even life. Is this obtained on door knobs or bedsteads or is it obtained in the upper respiratory tract of susceptible or unsuceptible humans?

In those diseases where nothing or little is known of the infective agent, as scarlet fever, measles and small-pox, careful epidemiological study has taught us that the infective agent is more virulent and more likely to cause infection in an exposed person during the period of invasion and that the respiratory discharges contain the inciting agent. Study of epidemics show that in the large proportion of cases where the illness can be definitely traced to a previous case of the specific disease it will be found that there was a direct exposure of the sick to the well or indirectly through the medium of milk, and not traceable to insects or other things contaminated by the previous case.

Such definite information points to the one logical conclusion, that is, that disinfection, to be effective, must be immediate and should aim at the particular known secretion or excretion which contains the infective agent and terminal disinfection, though possibly of some value in isolated instances, should not be relied on as a safeguard whilst terminal fumigation is usually improperly performed and valueless; but no doubt by the variety of evil smells generated gives a false sense of security to those for whose benefit it was performed.

### SHOULD TERMINAL DISINFECTION BE ABOLISHED?

H. W. HILL, M.B., M.D., D. P. H.,

DIRECTOR, INST. OF PUBLIC HEALTH; CHIEF, DIVISION OF EPIDEMIOLOGY; PROF. OF PUBLIC HEALTH, WESTERN UNIVERSITY; MEDICAL OFFICER OF HEALTH OF LONDON.

London, Canada.

My studies of terminal gaseous disinfection have led me to the belief that there is no real reduction in the incidence of death or disease to be gained by the use of such disinfection following the release, death or removal of cases of most ordinary infectious diseases in this part of the world. It is well known that when Chapin first proposed to abandon terminal gaseous disinfection for diphtheria and scarlet fever, most of the public health men of the day considered it an exceedingly dangerous experiment, and some predicted sweeping epidemics of both diseases. He was able to show, however, that both diseases had actually dropped off a little following the abolition of terminal gaseous disinfection.

I am health officer of London, and since I came terminal gaseous disinfection has been abandoned for all diseases ordinarily encountered in this part of the country, with the exception of tuberculosis, where it has been introduced and carried out rigidly on the death or removal of all open cases of pulmonary tuberculosis.

I did not abandon terminal disinfection without experimental evidence that abandoning it would do no harm. While in the Boston Board of Health laboratories, about fifteen years ago, we experimented on a large scale to see if we could find diphtheria bacilli or tubercle bacilli on the walls, floors of rooms, etc., recently occupied by patients. We found tubercle bacilli, and did not find virulent diphtheria bacilli.

Since abandoning terminal disinfection in London, diphtheria has practically disappeared from the city, and scarlet fever is quite a rarity. We have had a good deal of measles, but it is well understood that measles is a disease for which very few cities consider terminal gaseous disinfection necessary.

I have read with considerable interest a number of arguments put forward—rather late, as I think—in support of terminal gaseous disinfection. They are of academic interest only, because for fifteen years we have, in actual practice, found that terminal disinfection accomplishes nothing of value, in view of which fact academic arguments in its favor are merely curiosities.

Concurrent disinfection—i. e., disinfection of the discharges of the patient at all times while the patient is in an infective condition—constitutes the really important measures of disinfection, which should invariably be carried out in all infectious cases.

Disinfection by chemical solutions, soap and water or other efficient means of treating personal clothing, bed clothes, etc., of the patient should also always be done. What I object to is not disinfection, but terminal gaseous disinfection of rooms.

CHARLES S. CAVERLY, M.D.,  
PRESIDENT OF THE STATE BOARD OF HEALTH,  
Rutland, Vt.

I have no doubt we have heretofore laid more stress on this phase of preventive medicine than was really necessary. On the other hand, I feel as though we are in danger, perhaps, of going to the other extreme in abolishing terminal disinfection entirely. After certain diseases—chief of which are tuberculosis, diphtheria and scarlet fever—I should certainly hesitate to advise that terminal disinfection be omitted.

I do, however, believe that scrubbing horizontal surfaces, especially floors, with hot bichloride or carbolic solution, as well as soap and water, are in general good substitutes for the full terminal disinfection, which includes gaseous disinfection. The State Board of Health of Vermont has taken no action in this matter as yet, and I am merely speaking my individual opinion.

JOHN DILL ROBERTSON, M.D.,  
COMMISSIONER OF HEALTH,  
Chicago.

I am convinced that infection is generally conveyed from person to person by close association, and, less frequently, by persons handling contagious-diseased persons and coming in contact with a well person—as a careless nurse, doctor or parent, who many handle the sick and without washing their hands handle other patients or persons.

Still less frequently, infection is conveyed from the sick to the well upon articles of clothing and other things. All seem to admit that infection can be conveyed upon these things while the infectious material is fresh. It has not been definitely settled by the bacteriologists just when infection, away from its host, ceases to be fresh. Assuming that pathogenic bacteria remain active for even a short time—a few days, under favorable conditions—I would say terminal disinfection should be performed. This is predicated upon the supposition that no adequate continuous disinfection by a nurse has been practiced during the quarantine period. The best disinfection, of course, is the continual destruction of excretions of the patient, disinfection of things in the patient's room by immersion in a strong disinfectant solution during the period of sickness, scrubbing floors, furniture and woodwork with soap and water at the end of the quarantine, and letting in air and sunlight.

If this course is pursued, no gaseous terminal disinfection is needed. In fact, the terminal scrubbing could be omitted if the destruction of infection during sickness is thoroughly attended to; but, inasmuch as this ideal method of handling infection in the sick room is not generally carried out, it becomes a necessity to make some kind of a terminal disinfection. The kind of disinfection described above is preferable to a gaseous disinfection. Until the bacteriologists determine that pathogenic germs have no life history worthy of attention outside of their hosts, I will favor terminal disinfection in cases of contagious disease.

JOSEPH S. NEFF, M.D.,  
DIRECTOR OF HEALTH,  
Philadelphia.

Notwithstanding terminal disinfection is useless in some communicable diseases, and much is unnecessarily done, yet to abolish it is absolutely out of the question. It might be discontinued in such diseases as diphtheria, measles, etc., but should be continued in tuberculosis, smallpox and some other diseases the means of transmission of which we know little about.



## General Scientific

### THE VAGARIES OF BOARDS OF HEALTH.\*

REYNOLD WEBB WILCOX, M. D., D. C. L.,  
PRESIDENT OF THE AMERICAN COLLEGE OF PHYSICIANS,  
New York.

Boards of health are established and functionate under the general police powers of the State. They are supposed to be merely executive and deal with preventive medicine, and, in addition, with filing and preserving documents chiefly concerned with vital statistics; their most important function is in relation to sanitation and especially to communicable and contagious diseases. They are amenable to the Constitution of the United States, to the Constitution of the State in which they are located, and to the Federal and State statutes and to the local governing authorities. It would seem to be unnecessary to make this statement, but the conduct of certain officials at various times makes emphasis upon this point essential. If the significance of the word constitution is thoroughly understood in the sense which the makers of the Magna Charta and of its descendants intended it to convey, much that has been said and written would be not only superfluous, but even puerile. What is termed a constitution is no more or less than a bill of rights wherein are enumerated certain rights which are reserved by the people and for the people, and become inalienable and cannot be abridged or abrogated by either the executive, legislative or judiciary authority, and, least of all, by boards of health.

While in time of imminent peril from an epidemic of virulent infection, tacit acquiescence in their assumption, by boards of health, of authority superior to all inalienable rights of man, to all legislative, executive and even judicial authority, may be justified by the gravity of the situation, in ordinary times and under usual conditions such abuse of alleged authority should be severely punished by all legal and proper means. Because under certain conditions one man has a right to kill another and justifiable homicide is recognized by the law, it by no means follows that anyone can go about and kill indiscriminately without his crimes being dealt with in a legal manner.

Even commissioners of health are supposed to possess some degree of education, to have some modicum of intelligence, and to act with some judgment. Yet not long ago there appeared in the public press statements from one as liking his position, or was it his job, because it combined legislative, judicial and executive functions! He apparently was unaware of the functions of the legislature or the power of the bench or even of their existence. Or a more charitable explanation might be, that he was the result of an inefficient common school system. Many of the vagaries of boards of health, which result in real grounds of complaint, arise from the arrogance of ignorant officials, who assume that illegal acts committed in time of peril and tolerated, possibly even approved, can be perpetrated at all times and in all places without fear of punishment. Let boards of health, individually and collectively, realize that they are amenable, not superior, to the organic law of the land, and many of their vagaries would cease.

Boards of health should show in their publications at least an elementary knowledge of the English language, and particularly the language of medicine. The word "case," when used to designate a patient is hospital

*argot*, nothing more and nothing less, and when mention is made of "terminating a case," and that this function may be delegated to a nurse, the professional reader is not very much impressed by either the general or special education of the author of this particular information. The products of the publicity bureau need editing if they are to be worth the money spent upon them. The "slogans" designed for popular education may be attractive to certain classes, but these people should be educated up not down. That more or less prosy fiction, denominated statistics, can also be largely eliminated. It is a saying in Germany that if one has a fool for a son, make a bad artz of him. It seems to be an axiom in this country that a graduated Doctor of Medicine who has failed to earn a living by alleviating suffering and curing disease, is thereby qualified for employment in the department of health; failure to treat disease successfully implies great skill in preventing it or its dissemination. Would that this were true! For if it were, the individual would be a far more important member of society if he were employed in the latter rather than in the former capacity. Unfortunately the employes of departments of health seem to be appointed for political consideration rather than for scientific knowledge or executive ability. There are, however, exceptions; of the two out of all the commissioners of health with whose careers I have been acquainted in the last thirty years, one was appointed for purely political reasons, but he possessed great executive ability and good judgment; the other was an excellent and successful general practitioner for many years, who had an excellent underlying scientific training, and both made enviable records. Of the rest, the less said the better.

To the general personnel the same statement applies; in the main, it is fair. There are, of course, exceptions. The vicious as well as ignorant and incompetent misfits and incompetents are usually found in the part time and no time employes, those who are supposed to work during certain hours for the municipality which pays for those hours, but usually attend to whatever patients they by chance may secure during these hours. The fact that they are employes of the department of health being some sort of a guarantee, in the minds of certain classes of people, that they are competent practitioners. These not only use their position to obtain patients, but use the time for which they are paid from the public funds to increase their private gains. They do not see any impropriety, least of all dishonesty, in this conduct. Even one of the higher officials in the board of health has publicly expressed surprise that it was disapproved of by any one, so this may be presumed to be one of the vagaries of employes of boards of health.

Is there any reason to suppose that one who has been a failure in the practice of medicine or surgery in private, should become any more efficient when in the public service? It is one of the vagaries of boards of health that this is true, and that the practice of medicine as well as prevention of disease is a function of the department of health. So far as contagious diseases go, there is no objection, but when, as is alleged, some six hundred thousand dollars a year is expended for this and allied functions in the city of New York alone, it would appear that treatment of disease should be preferably left to those who can perform this work in a more efficient way. This is one of the vagaries quite inexplicable to the taxpayers who bear the cost, especially since this work is not limited to the impecunious or their offspring.

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And if the work of the department of health is so valuable and so successful, should not the facts speak for themselves, and the generally improved conditions be so manifest that all would be acquainted with them? It seems to be another of the vagaries of the department of health that publicity and reiterated asseveration are necessary to justify its existence, and the taxpayer should pay for the recital of the results alleged to have been obtained. Advertising is important and especially important if no one suspects that the real values are modest, to say the least.

It is with no personal bias that these criticisms are offered. Only twice in thirty years has there been any personal censure: once nearly a quarter of a century ago the writer failed to note on a death certificate upon what floor of a private house the owner died. His attention having been called to this grievous omission, he immediately corrected it. Naturally, had it been a tenement house—a tenement house being for the purposes of the department, one occupied by more than two families, living separately—the omission would have been important. The other instance was recent—in reply to an inquiry as to why no confinements had been reported, the writer suggested that he had been an internist for more than twenty years. This did not seem to be satisfactory, for it was argued that if eye and ear, nose and throat doctors, orthopaedists, paediatrists, general surgeons, surgeons, alienists, venereal specialists, and others supposed to be exponents of special departments of the healing art, reported confinements, there was no reason why an internist should not do the same. The explanation that no instances of confinement had been accepted during that period was at least regarded as satisfactory.

Another of the vagaries of the department of health is the absence of final and definite policies. For instance, fumigation after certain contagious diseases for scores of years has been enforced under threats of fine and imprisonment. With solemn mien and unalterable resolution the board of health has gone about making most awful stinks and occasionally destroying property. We are now told that this is unnecessary, at least, it will be omitted in certain districts for purposes of observation and statistical results. One who knows the vagaries of the official disinfecter, suspects that fumigation has not always been so thorough as was supposed, or even that it has been practised so universally as was imagined. The prudent housewife, stricken with dismay at his invasion, doubtless found a way to avoid what probably seemed acts of vandalism. The department calls it graft, the man on the street blackmail, but the law designates it as extortion.

The purpose of the department of health is not to exhibit vagaries which excite scientific amusement more or less expensive, generally more, nor to be a haven of rest for medical misfits and incompetents, nor a means of support for political defectives. It is not organized for the practice of medicine, nor for the manufacture and purveying of medicines or supplies, nor for the purpose of lawbreaking, nor for yielding opportunity for larceny, grand or petty, nor for usurping functions of government properly delegated to other departments. It has its proper place in sanitation and in the prevention of communicable and contagious disease, and this constitutes a field of action quite exhaustive enough for scientific and effective work. To do this work efficiently requires honest and specially educated men. If we may be able to point with pride to the department of health, we must first insist upon a higher standard of honesty than now obtains in our public service, and we must have a special and a higher standard of education

for its personnel, who will devote all their time and energies to what should be a respectable and honorable vocation.

A higher moral standard for the public servant will force the first requirement. The degree of Doctor of Public Health which can now be obtained, after proper study and passing of suitable tests as to knowledge acquired, at Harvard and other universities, as an absolute prerequisite for employment on or in boards of health in any scientific or executive capacity, will obviate many of the vagaries, to use a mild characterization, which have brought so much discredit upon an important field in preventive medicine.

The course is clear, the remedy is efficient, and nothing stands in the way of its adoption but political mendicancy, vicious greed and ignorance masquerading as science; all forces of evil. The only question is: how long will this altruistic and enlightened century permit progress to be halted by these forces of evil?

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### THE CLINICAL DIAGNOSIS OF SYPHILIS.

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In recent years the laboratory diagnosis has supplemented or supplanted the clinical methods of determining the presence of syphilis. In former times the diagnosis was made purely on the clinical findings and the older practitioners became very skillful in observing the data and drawing conclusions, and from a few apparently unimportant symptoms a correct diagnosis was established.

The tendency of to-day to depend exclusively upon laboratory findings in making a diagnosis in diseased conditions of all kinds is strongly to be deprecated. I believe that we should make our diagnosis as far as possible from observation of the clinical facts and then confirm it by the laboratory methods.

In syphilis, which is characterized by active symptoms, alternating with periods of latency, during which no manifestations are present, we must frequently depend entirely on the laboratory for a diagnosis, but in all cases, at some time or another, manifestations are available for the skilled observer so that he may be positive of his ground.

#### Primary Stage.

In the primary stage the only symptoms are the initial lesion or chancre and the enlarged lymphatic glands adjacent. The chancre may assume various forms, but its characteristic feature is always the induration.

The amount of induration varies greatly in different cases. Where it is only slight it occasions the so-called split-pea variety of chancre. When the induration is spread out thinly under the skin it occasions the parchment form. Where the induration is considerable in amount a typical Hunterian chancre develops. In all the cases, however, the feeling of the induration is always the same, and the trained finger is capable of recognizing an ivory hardness under the tissues.

The second point of importance in the diagnosis is the invariable enlargement of the adjacent lymphatic glands, and a chain of small, round, hard, freely-movable lymphatic glands, resembling a rosary in feeling, is very characteristic.

The third point upon which we depend for a diag-

nosis is a history of a three weeks' incubation of the sore.

In a typical case by considering these three points the diagnosis is easy, but many of the cases are atypical.

Chancroids, especially when cauterized, take on an inflammatory hardness of their bases. The edema of the prepuce as the result of paraphimosis is sometimes misleading. Chancroids of the meatus or sulcus coronarius are very apt to become the seat of inflammatory induration, while a chancre located a half an inch or an inch within the urethra may be easily mistaken for a gonorrhea until more careful palpation of the urethra discloses the induration.

Mixed sores in which a double infection with the spirocheta pallida and the bacillus of Ducey have occurred are exceedingly difficult of diagnosis and can only be judged correctly by the appearance of secondaries.

Extra-genital lesions are notoriously difficult of diagnosis, and a chancre of the lips, tongue, nipple or finger requires great care in examination in order to avoid making a serious error, although the three points above mentioned—the character of the induration, the time of incubation and the rosary-like swelling of the nearest lymphatic glands are great diagnostic aids.

Gumma of the penis occurring as a tertiary lesion is not infrequently mistaken for a primary sore or even a re-inoculation with syphilis.

#### Secondary Stage.

The character of the secondary period of syphilis is that of a general infection with spirochetæ which are disseminated throughout the entire body and resembles all the acute eruptive diseases due to a specific organism. Unlike the other eruptive fevers, the active cause does not die out in the body, leaving a state of immunity, but it has a tendency to persist, and the disease recurs from time to time in more aggravated forms, of general distribution and accompanied by pathological changes in the various structures of the body.

Diagnosis in the early period is usually not difficult, especially where the initial lesion has been under observation. Five or six weeks after the first appearance of the sore, prodromal symptoms are noted, and slight fever, rheumatic pains, malaise and anemia are generally followed by manifestations on the skin and mucous membranes.

Affections of the skin, or syphilides, are most important helps to diagnosis, and next to them come those of the mucous membranes of the mouth or throat.

All secondary syphilides possess certain characteristics which render their recognition easy to the trained eye. Their polymorphism, color and pigmentation, general and symmetrical distribution, mode of grouping, so as to form annular or circular lines, the consistency and color of scales and crusts, and the absence of itching, are all significant points to the experienced student of syphilis, but have little or no significance to the man who sees only an occasional dermatological case.

To differentiate a late papular squamous syphilid from a psoriasis, or to decide that a pustular acne of the back is not a pustular syphilid, or that a drug erythema following the ingestion of copaiba is non-specific, is not always an easy task.

There are no pathognomonic skin lesions of syphilis, although the moist papules or condylomata of the scrotum, anus, vulva and mammae must all be considered as very characteristic, and the scaly patches on the palms of the hands and soles of the feet, although frequent in syphilis, are also found in eczema, psoriasis and lichen ruber.

Next to the skin the mucous membranes of the mouth and throat are the most constant seats of the lesions of secondary syphilis. The appearance may be limited to a redness of the fauces, but usually a distinct superficial ulceration or true mucous patch is observed. When located in the fauces and covered with a wash-leather appearing necrotic scab it is impossible to distinguish the mucous patch by inspection from a true diphtheria.

The lymphatic glands throughout the body are very important as evidence of syphilis. In consequence of the infection all the lymphatics are enlarged and those lying superficial at the back of the neck, epitrochlear and inguinal regions are easily palpated and their characteristic enlargement noted. Paramammillar glands, when they occur, which is only once in ten times, are very typical.

The glandular enlargement disappears as the disease grows older and is only useful for diagnostic purposes during the first year of the disease.

Other symptoms occurring during this period are suggestive, such as loss of hair in patches, iritis, early periostitis, nocturnal headaches and affections of the nails. During the later part of the secondary period paralysis of the cerebral nerves, particularly those affecting the eye, persistent neuralgias, and in women, repeated abortions throughout the entire course of the disease, give rise to a strong suspicion of a luetic infection.

#### Tertiary Stage.

In the tertiary stage the spirochetæ are no longer generally distributed throughout the entire body, but become localized in a few structures. All regularity of the manifestations as to chronology, recurrence, course, etc., is at an end and, capriciously lesions become manifest in one or another organs, which may heal spontaneously, or as a result of treatment, but rarely without leaving some loss of substance or some irreparable impairment of function.

The history of infection, of precarious value under any circumstances, is much more unreliable in late than in early syphilis. Often the denial is made in good faith, because time obliterates facts from the memory, or the early symptoms were overlooked and their nature not recognized.

In cases where a distinct history of early syphilis is obtained conclusions may be drawn from symptoms otherwise doubtful. Under any circumstances careful examination may confirm the diagnosis by the discovery of signs of former manifestations. Palpation of the lymphatic glands may show remnants of former enlargement. Characteristic scars on the genitals may be left from the initial lesion. Inspection of the entire skin often discloses scars or pigmentation. The anal region and the corners of the lips and mouth often bear old cicatrices, and the neck and lower extremities are the seat of a peculiar pigmentation, although it should be remembered that every scar on the legs is not of syphilitic origin, since varicose or traumatic ulcers never heal without leaving pigmented cicatrices.

The tertiary symptoms on the skin, when visible, while differing in form, distribution, symmetry and course from the secondary lesions, are, in their own way, just as distinct and characteristic. Notably affections of the skin and subcutaneous gumma with resulting ulcers, rupia and tuberculous serpiginous syphilides present a picture which is recognizable as far as the eye can see.

Mistakes can be made, as, for instance, in the case of an ulcerating tuberculous syphilid on the side of the nose resembling lupus or epithelioma, or obstinate patches of psoriasis, or gouty eczema.



The tongue is a favorite seat for tertiary lesions, and differentiation from carcinoma by clinical observation alone is sometimes impossible.

Syphilitic new growths of the testicle and epididymis are not always easy to distinguish from other neoplasms caused by sarcoma, tuberculosis, or even gonorrhea.

Another manifestation of late syphilis are the changes in the finger-tips consisting in coldness, bluish color, circumscribed necrosis and exfoliation of the epidermis or even gangrene resembling Raynaud's disease.

Frequent and persistent alterations of great diagnostic value are changes in the periosteum and bones, especially the tibia, ulna and cranium.

In form syphilitic affections do not differ from traumatic and non-specific forms. Spontaneous pain and nocturnal exacerbations and the peculiar consistency of the gummatous swelling generally reveal their true character.

For the diagnosis of visceral syphilis tertiary affections of the internal organs, the liver, spleen, kidneys, lungs, heart and particularly of the great nervous centers, the spine and brain, almost every positive sign is generally wanting, and it is in these cases that the laboratory methods have been of the greatest aid in modern times for the diagnosis of obscure affections due to an old and latent syphilis.

#### Laboratory Methods.

As already indicated, we can often make a diagnosis of syphilis by the clinical findings, but I believe that we should always employ laboratory methods as a control and check against our clinical observations.

The great field, however, for laboratory diagnosis are the cases of visceral syphilis where no signs are obtainable, and by means of the laboratory tests we can make our diagnosis and apply the appropriate treatment.

Under the head of laboratory methods there are four ways of making an examination in order to arrive at a diagnosis.

I. The demonstration of the spirocheta pallida in the initial lesion or mucous patch.

II. The Wassermann reaction of the blood.

III. The cutaneous or luetin reaction of Noguchi, and

IV. The findings in the spinal fluid.

These are, however, all methods which require a high degree of technical skill, pathological training and a long experience in laboratories before they can be accurately made, and unless they are made correctly it is better that they be not made at all, for an incorrect laboratory report merely serves to obscure the clinical diagnosis.

Another point to be considered is that all laboratories are not absolutely reliable, as some of them are conducted by half-trained men. Needless to say, reports from an unreliable laboratory cannot be depended upon and are worse than useless, whereas reports made by a reliable laboratory under the charge of a competent chief are of the greatest aid.

As treatment is now begun as soon as the diagnosis of syphilis is established, it is highly important that the spirocheta should be found at the earliest possible moment. This is best accomplished by means of the dark field illumination, which is regarded by every one as the simplest and the most practical means of finding the spirocheta in the initial lesion.

The spirocheta may also be found by mounting and staining with Giemsa, or sections may be cut from the chancre and stained after Levaditi's method, but these methods are of less value in clinical work.

The method of using the dark field illumination is simple. The chancre is first washed with salt solution,

to cleanse it, and then rubbed briskly with gauze, the resulting blood is sponged away, and in two or three minutes the irritation serum comes from the deeper parts. This is collected on a slide, placed under a microscope provided with the dark field illumination, and if it be a syphilitic case numbers of spirochetæ can be distinctly seen undulating their way across the field.

#### Wassermann Reaction.

The introduction of this test has marked one of the great advances in syphilis in this epoch-making age. By means of this test we are able to diagnose positively all the late and latent cases of visceral involvement or doubtful external manifestations in which no clinical data are obtainable.

It is now believed that the old original Wassermann method is the only reliable one to use. Various short cuts have been devised and different modifications introduced, but they have been found to be unreliable and, as a consequence, have all been dropped.

It is to be noted that the Wassermann reaction does not appear simultaneously with the infection, but that it usually makes its appearance in from six to eight weeks later. Occasionally it appears earlier, but the time mentioned is the average, and is just when the blood begins to be saturated with the spirocheta and its toxins.

In secondary syphilis the Wassermann reaction is 100 per cent. positive in untreated cases; that is to say, every case responds. Occasionally in untreated cases the Wassermann reaction becomes attenuated, so that as the years go by the disease dies out of itself, but that fortunate occurrence is very rare, and it behooves us to treat these cases vigorously and continuously until the Wassermann reaction becomes negative and remains so for a period of a year or more. In a few late latent cases, however, in spite of treatment, the Wassermann reaction remains a strong positive. Whether this implies that a focus of spirochetæ is stored up somewhere in the body uninfluenced by treatment, we are not sure. The usual explanation for this phenomenon, however, is that there is a fast or permanent fixation of the Wassermann reaction which we are unable to influence by treatment. If, however, a reduction of the strength of the Wassermann takes place after administering salvarsan and mercury it indicates the need of additional treatment, especially if the preceding treatment has been inadequate, and the treatment should be continued until such time as the Wassermann becomes completely negative. If several courses of intensive treatment have been given and the Wassermann remains positive, it may be proper to disregard its positiveness and consider the patient as cured.

#### Provocative Injections.

There is a diagnostic procedure which is very useful in certain cases where the Wassermann reaction is either negative or weakly positive following a good deal of treatment, but where we still suspect the presence of syphilis, and these are the cases in which the diagnosis can be cleared up by the so-called provocative injections of salvarsan.

It has been found that while a positive Wassermann can be rendered negative by sufficient treatment through the destruction of the spirochetæ, a weak positive reaction may be reactivated by giving a small dose of salvarsan if syphilis is actually present. If there is no syphilis, the reaction will not be influenced.

This has now become a routine measure in doubtful cases and the method of application is as follows:

Salvarsan to the extent of 0.3 gram is injected intra-



venously and the patient's blood examined on succeeding days. In the presence of syphilis, where the blood was formerly negative or a weak positive, the reaction is changed to a strong positive and this generally occurs in twenty-four hours. If the patient be not syphilitic, the reaction remains negative.

#### Luetin Reaction.

The luetin reaction was devised by Noguchi in 1911. He made different cultures from different strains of spirochetæ, heated them for an hour at 60° C. and added 5 per cent. of tricesol. This made a suspension, the spirochetæ were killed and the antibodies and properties which they produced were contained in the suspension. Of this suspension from .03 to .05 c.c. were injected hypodermically in the arm. If the patient were syphilitic a positive reaction made its appearance in from four to five days.

Three types of positive reaction were described by Noguchi. A positive reaction appears as a papule or pustule. If the patient were not syphilitic the reaction would be negative, and a small erythematous area would appear which lasted for a period of two days and then faded away; so that if no papule or pustule appears the patient is regarded as not being syphilitic.

Noguchi found that a positive reaction did not occur in the primary stage of syphilis, and in secondary syphilis it would only occur when treatment were given. It was found to be more frequent in occurrence in the latent and tertiary periods.

In a series of experiments carried on by Captains H. J. Nichols and C. F. Craig, of the United States Army, they found a positive Wassermann reaction in 23 per cent. of cases of secondary syphilis and a positive luetin reaction in 38 per cent. In latent syphilis they found a positive Wassermann reaction in 25 per cent. of cases and a positive luetin reaction in 87 per cent.

#### Lumbar Puncture.

A valuable means of establishing a diagnosis when the blood Wassermann is negative in reaction, consists of making a lumbar puncture. This procedure, when carried out under certain precautions, is safe and simple. The patient should be kept in bed for twenty-four hours after the puncture in order to avoid nausea, vomiting, headache and dizziness. In making a lumbar puncture in the presence of cerebral tumors great caution should be observed because of the fact that cases of sudden death have been known to occur from the withdrawal of the fluid.

#### Technique of Examination.

I prefer to tap the spine with the patient sitting up, although some surgeons place the patient in the recumbent position. In order to get the proper point for the puncture a line is drawn extending across the spine, just above the crests of the ilia on each side. About one inch above this line is a suitable place to introduce the needle. The skin is sterilized, ethyl chlorid is sprayed upon the skin to anesthetize it, and a long spinal needle is thrust between the spinous processes of the vertebrae into the spinal canal. The entrance of the needle into the spinal canal can be appreciated by a feeling of sudden giving way of the tissues in front of the needle, and the fact that it is in the spinal canal is confirmed by withdrawing the stylet and allowing the spinal fluid to escape through the needle.

The examination of the spinal fluid after it is withdrawn should be conducted as follows:

First, estimate the pressure.

Second, the cell count.

Third, the globulin test.

Fourth, the Wassermann reaction.

Fifth, the colloidal gold reaction.

The intraspinal pressure is taken by noting the rise of the spinal fluid in the glass tube attached to the apparatus. The pressure possesses no particular diagnostic value except that it is increased under certain conditions, like tumors of the brain and hydrocephalus.

The cell count is made by counting the number of cells under a microscope to a given amount of fluid.

From none to five white blood cells is considered normal. From 6 to 10 cells is supposed to be a borderline case. Over 10 cells is pathological. An increase in the number of cells denotes a syphilis of the brain or cord, or some form of irritation in the meninges.

The globulin test is also spoken of as Phase One of the reaction of Nonne. The presence of globulin occurs only where there is organic nervous disease. It is not found in normal spinal fluid. The globulin test is useful in differentiating between central and functional nervous disease. It is estimated that globulin is present in from 80 to 100 per cent. of all cases of nervous disease caused by syphilis.

#### The Wassermann Reaction in the Spinal Fluid.

In diseases of the nervous system, especially of long standing, the Wassermann is not always positive in the blood. In theory it should be positive, but in practice we find that it is not so, and even after a provocative injection of salvarsan we sometimes fail to get a positive Wassermann in the blood, although in general paresis it is positive in 100 per cent. of the cases, whereas in tabes it is positive in only 60 to 70 per cent. of cases, irrespective of the fact that we know tabes is just as much a disease of syphilitic origin as is general paresis. In the spinal fluid, however, in general paresis the Wassermann is positive in 100 per cent. of cases, and in all tabetic cases, if active, the reaction is positive.

After a time, following the subsidence of the active inflammatory process in tabes, there is only a purely degenerative change, and the Wassermann reaction is no longer positive in the spinal fluid in these sluggish, degenerative cases.

#### Colloidal Gold Reaction.

In 1912 Lange described the action of cerebro-spinal fluid in various conditions upon a colloidal gold solution.

He demonstrated that the reaction could be used as a delicate test, differentiating normal from pathological cerebro-spinal fluids and particularly distinguishing syphilitic from other affections of the central nervous system.

A gold reaction typical of syphilis is nearly constant in cases of syphilis of the central nervous system. The test is more delicate than Wassermann reaction in the blood or spinal fluid, cell count or globulin, content.

The test has the advantage that it gives a reaction with pathological special fluids, due to other causes than syphilis that is characteristic and easily differentiated from the reaction typical for syphilis.

We should make it a rule to do a lumbar puncture in the case of every patient with symptoms pointing to an involvement of the central nervous system, and also in latent cases of old syphilis, especially those with a negative reaction in the blood, for the purpose of determining if there is a latent process in the cerebrospinal system.

The puncture is not only of value as a point in the differential diagnosis between different diseases of the nervous system, but, in addition, is an index of the activity of the syphilitic process, and, furthermore, it acts as a control as to the effects of treatment.

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## THE DETECTION AND CONTROL OF TYPHOID CARRIERS OF DISEASE.\*

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The first idea that I wish to convey is that it is possible to determine the source of infection of typhoid fever cases in a large percentage of cases, if inquiry is made along certain lines and if the investigation is carried far enough. All cases of typhoid fever are infected directly or indirectly by acute cases or by chronic typhoid carriers. The vehicle of transmission may be water, milk, raw foods, door knobs, flies, and the like. It is not sufficient to say that a patient receives his infection from water or milk; we must find out who it is that infects the water or milk. If the water in question is known to be polluted by raw sewage it may be accepted as the source of infection without further inquiry.

In work of this kind there are certain rules and proprieties which must be observed.

First—It is always advisable to consult the attending physician and gain his consent to see the patient or family.

Second—Do not quiz a patient who is acutely ill because the data is of no value and it irritates the patient.

Third—If an outbreak is just starting it may be sufficient to simply talk with the nearest relatives.

It is essential that attention be focussed on the period of seven to twenty-one days prior to the date of onset. Other dates of possible exposure may be disregarded. By date of onset we mean the date on which the patient first becomes conscious of feeling uncomfortable. A calendar in the hand is of the greatest assistance. Having determined the exact period of two weeks to be investigated, find out who the patient associated with during the period; who of these ever had typhoid fever; who of them have suffered from gallstone trouble; who of them have had typhoid cases in their homes; who of these associates have had mother or cook in their home caring or helping to care for cases of typhoid fever? Ascertain what meals have been taken away from home and if the green vegetables were washed in the canal or a badly polluted stream. Had the patient eaten oysters and if so when and from whence were they obtained? What water was used; what is the milk and cream supply; where was ice cream obtained? Are there other cases in the family or neighborhood? How many cases have occurred in this home or immediate neighborhood during the last five years? What is the age of the patient? What was the sequence of cases in the community? Are the cases grouped or scattered in point of time? Are the cases scattered evenly over the community? Has there been any common public function, such as a picnic or banquet? How many of the cases are secondary in the same family?

Of those cases grouped together in point of onset what is there in common? If water is the common thing, what is the record of water analysis during the period of seven to twenty-one days before the date of onset? If the record is good, look elsewhere for a matter in common. If milk from the same dealer is used, what proportion of the total milk supply is given by this dealer? If there is but one dealer and no evidence of typhoid infection is found among his help, search carefully for any milk that he may have obtained occasionally from a different supply. If this search is negative, look for other things that have been in com-

mon, the same school, church, candy, ice cream, rare hamburger steaks restaurant, common cup, towel, toilet, common railroads, common unsanitary conditions with numerous flies, common swimming pool.

In the search for common sources of infection it may develop that certain individuals are frequently associated with the present or past cases. It may be that these persons have had typhoid fever years before or do not recall that they ever had typhoid, but have helped care for cases. A further investigation of these people should always be made.

It will often be best to have this investigation done by their family physician. If this physician does not show interest in the matter, an offer to pay him for a call will often elicit a prompt response. There are many advantages in having this work done by the family physician. The patient will co-operate better, deception will not be practiced so often, and the patient will have more confidence in the result of the examination. The patient will often respond to suggestions by the family physician better than from any other person.

If there is a history of typhoid fever, followed by symptoms of cholecystitis, often associated with cases of typhoid fever, an examination of the excreta from the bowels and the urine should be made at once. The department has outfits in which these samples may be collected and sent to the laboratory. They should be delivered to the laboratory within twelve hours from the time they are passed.

If there is a group of people with indefinite histories, but any one of whom may be a carrier, take a sample of blood from the ear of each and send to the laboratory for a Widal test. Examine the excreta from those who give a positive Widal test.

It may be necessary to examine several samples of excreta before finding the typhoid organism. When the history is suggestive, have several tests made if the first tests are reported negative. At the present time thirty-five typhoid carriers are under supervision in New York City and twelve in the remainder of the State.

### What Can Be Done with These Carriers?

Inform them that they are carriers. Most persons so informed will care for themselves in such a way that they will not be a menace to the public. All that will be needed in most cases is to suggest that they use an individual towel, use only closets made sanitary by cleanliness and protected to exclude flies. When flush closets are available, the water should be dosed with a couple tablespoonsful of fresh chloride of lime, and the hands washed with a disinfectant, such as lysol. They must, of course, be excluded from the handling of raw foods, except in their own household, and the remaining members of the household should be immunized with typhoid vaccines.

### A Bladder Sedative.

As a bladder sedative in the milder cases; where there is vesical spasm, frequency of micturition, or pain; at the early onset of simple cystitis; in slight bladder chill giving rise to abortive cystitis; in urinary irritation, and in the irritation caused by hyperacidity; in prostatic irritation, and in most forms of bladder irritability, except where there is strong alkaline decomposition.

R Potass. Citrat. ....	grs. x-xx
Sodii Bromidi .....	grs. x-xx
Tr. Belladonnæ .....	℥ v-xv
Tr. Hyoscyami .....	℥ xx-xl
Elixir Uritone Co (P., D., & Co.).....	5i-3ii
Infus. Buchu (recentis).....	ad 5i
Misce. Ft. mist.	

Sig.: Two tablespoonfuls in water every four or six hours.  
—(Practitioner, No. 2, 1916.)

\*Read at the Health officers conference, Saratoga, N. Y., June 6, 1915.



## THE MENACE OF THE BITING STABLE FLY.

JACQUES W. REDWAY, F.R.G.S.,  
Mount Vernon, N. Y.

Two animals—the Oriental rat and the biting stable fly—are a menace to humanity and should be exterminated whenever and wherever found. Whether or not the one is a medium whereby bubonic plague is communicated, and the other a means of spreading infantile paralysis, are questions and problems for the bacteriologist, and not for the layman, to discuss. Their crime and offense against humanity is broader: each spreads filth and the parasites that abound in filth.

Of the dozen or more species of flies that infest houses, the biting stable fly is neither more nor less filthy in its habits than the common house fly or any other species. It is more dangerous not because of its habits, but because its mouth parts possess horny terminals that are sharp enough and strong enough to pierce the skin. The common house fly does not possess such mouth parts. The tsetse fly of tropical Africa does possess skin-cutting mouth parts, and thereby communicates sleeping sickness. Other local species, which are non-blood sucking, rarely communicate it. The ability to pierce the skin constitutes the chief danger of the biting stable fly—*Stomoxys calcitrans*.

There is a popular tradition that flies "bite" during rainy weather. The common house fly does not "bite" at any time. During stormy weather, however, the stable fly seeks shelter; and indoors it "bites" quite as ferociously as out of doors.

The term "stable fly" is something of a misnomer for the biting member of the family. Rotting straw stacks is its preferred habitat. It infests stables because of the presence of rotting straw. A few years ago rotting heaps of straw manure were allowed to accumulate in a vacant lot next to a public school. For a week or more there was no trouble. Then a swarm of biting stable flies invaded the school building, and there was trouble indeed. A few years ago there were bumper crops in the wheat belt of Texas, and stacks of loose straw were here and there. Nothing occurred until several heavy rains fell and the rotting process began. Then there were lively times. The swarms of flies were so savage that one might as well face a swarm of angry bees as to remain near one of the infested stacks.

The biting stable fly is everywhere and anywhere that rotting straw piles exist—the United States, Canada, Argentina, Russia and India. In countries having cold winters a few eggs and pupae survive the winter and furnish the six or eight crops for the following summer. In tropical rice belts they breed all the year around. Where straw heaps and straw manure accumulations do not exist, decaying vegetation of almost any sort becomes a breeding place. Cow and horse stables are favorite places—hence the name, "stable fly." The rotting provides two necessary things—the right temperature for incubation and food for the larvae. Indeed, in a general way, the breeding places of insects are a matter of natural selection, evolved through a process of survival. Thus, horse dung has become the selective breeding place of the house fly, and putrescent flesh that of the green bottle fly. These may be regarded as normal phases. Nature is always able to short-circuit, however, and when occasion demands breeding may occur in any sort of substance that yields the warmth necessary for incubation. The tsetse fly, for instance, is structurally oviparous, but occasionally becomes viviparous—perhaps normally so. Instead of eggs the female may deposit larvae, which at once bur-

row into the moist soil (*Austin*). It is doubtful if such a short cut occurs to dipterous insects in extratropical regions, but certain it is that the abnormal in the case of insect genesis is not unknown; nature helps the insect to "get there" in some manner or other.

Ordinarily the life-cycle of the stable fly is simple. The eggs, each about one-twenty-fifth of an inch long, are deposited on stalks of straw. If the latter is warm and moist the maggots hatch in a day or two—frequently in twelve or fifteen hours. They shun the light and seek to burrow into the breeding matter. The larva stage lasts from fifteen to thirty days—more or less. The pupa stage requires from one to three weeks ordinarily. But the extraordinary frequently occurs: The pupae may remain in a condition simulating hibernation throughout the winter, thereby furnishing the "seed crop" of a succeeding year. In very warm weather, however, the interval from the time of deposition of the eggs to the emergence of the fly may not be more than three weeks. Fortunately, the stable fly is short-lived, lasting rarely longer than two weeks. Unless carried or blown by the wind, it rarely flies more than a few feet from the place in which it was bred.

The researches of the Department of Agriculture, through Mr. F. C. Bishopp, presents the strongest evidence possible that various maladies of domestic animals are due to this insect. That it is probably a factor in communicating anthrax, the infectious anaemia known as "swamp fever," and a form of septicemia, are facts well established. Whether or not it is the chief factor, or any factor at all, in communicating poliomyelitis needs not be discussed here; neither, in the present state of knowledge, is it worth while to argue whether some colonies of flies are infected while others are not.

The one fact to be kept in mind is the fact that its mouth parts pierce the skin; that it is a blood-sucker of the most savage type. It is, therefore, capable of communicating any infectious disease, the germs of which it may be a carrier. The researches of Mr. Bishopp have shown that the liberal application of commercial borax to straw, heaps and stable accumulations kills both larvae and pupae, and also devitalizes the eggs. A better way, however, is to destroy the breeding places. If there is no moist, rotting filth there will be no flies. If stables are made clean and are kept clean, flies will not breed in them. If the manure piles are liberally saturated with borax no insects will breed in them. If yards are kept free from rotting manure and if garbage receptacles are covered, but very few flies of any sort will breed in back yards. In the congested parts of the cities, where the sidewalks are even nastier than the streets, it would be strange if flies did not find breeding places.

### Ether Administration.

Isabella C. Herb, Chicago, describes the methods of ether administration used by her in the Presbyterian Hospital, both as regards the ordinary open method and the intrapharyngeal method. The question of warming the ether vapor is discussed, the proper aseptic surroundings are described, and she makes a comparison between the open and closed methods, pointing out the advantages of the former. These are stated in her conclusions as follows: "The anesthetic state should closely resemble normal sleep. Simplicity in the administration of ether, as simplicity in other branches of medicine, is desirable. As much air or oxygen as is consistent with narcosis should be allowed. That there is any distinct advantage in warming ether vapor is very doubtful. The conservation of body heat during anesthesia is of great importance. With the open method of etherization, the patient's blood is well oxygenated throughout the most difficult operation, and patients leave the operating table with normal color and normal respiration. There is less injury to the lung epithelium when an abundance of air is allowed with the ether."—(*J. A. M. A.*)



## FOOD AND FEEDING IN INFANCY.

J. EPSTEIN, M.D.

New York.

During the first year of life there is a greater gain in weight, height, circumference of the head, functional ability, activity of the special senses and intellectuality than in any single year in later life. In order to make such rapid development possible, the infant must receive an abundant supply of food. Though the demand for food in infancy is proportionately greater than in adult life, yet the infant's dietray is a very simple one, consisting of milk only.

Were every mother to nurse her baby, pediatrics would lose a great deal of its importance and usefulness, and babyhood would lose a great deal of its troubles. Unfortunately, many mothers are unable or unwilling to nurse their young, and this gave rise to a special branch of pediatrics, called infant feeding. Scientific infant feeding requires a knowledge of the infant's metabolism, its caloric need, its age, weight and digestive ability. The percentages of the different constituent elements in the food, the exact quantity of food at each feeding, and the regular intervals of feeding. But for the general practitioner, a practical knowledge of food and feeding in infancy is quite sufficient to enable him to prescribe intelligently artificial feeding in a majority of healthy infants.

That healthy mother's milk is the best food for her infant is very evident on biologic, theoretic and practical principles. A baby on the breast gets whole, fresh, living milk, undiluted and unpolluted. When given at regular intervals, the infant builds up a healthy body, able to resist or overcome disease.

If the supply of mother's milk is insufficient to nourish her infant, mixed feeding of breast and bottle should be given, either alternately or to suit the convenience of the mother. Every effort must be made by a proper diet of milk, cereals, meat and other suitable food to improve the mother's nutrition and her supply of milk. Proper rest of body and mind and moderate exercise are essential during the period of lactation.

Infants who are entirely deprived of maternal food must take cow's milk as the next best substitute food. Cow's milk differs from human milk in the percentage composition of its constituent elements, in the digestibility of the protein and fat, and in the biologic properties. In order to make cow's milk suitable for the human infant it must be so diluted or modified as to make it as near as possible to human milk and to fit it to the digestive ability of the infant.

	The Percentage Composition of	
	Average Human Milk	Average Cow's Milk
Protein .....	1.50	3.50
Sugar .....	7.00	4.50
Fat .....	3.50	4.00
Salts .....	0.20	0.75
Water .....	87.80	87.25

The reason the general practitioner finds it difficult to prescribe food for an infant is because he usually learns some milk formula which he soon forgets. He does not learn the simple basic principles of artificial infant feeding. The following four fundamental principles must be determined in each individual case of artificial infant feeding.

1. The quantity of food this particular baby requires at each feeding.
2. The intervals of feeding for this baby.
3. The entire quantity of food necessary for the twenty-four hours.
4. The modification of the cow's milk to make it suitable for this baby.

There is no absolute means of telling exactly how much food each infant requires at each feeding, but in a general way the following practical rule will be found useful in the majority of cases: An infant requires as many ounces of food plus one as it is months old. That is, a baby three months old, of average weight and health, will take four ounces of food at each feeding, and one four months old will take five ounces of food. Younger infants will take a little more and older infants will take a little less than their age in months would indicate. The mistake is frequently made in telling the mother to take so many tablespoonfuls or cups of milk and so many tablespoonfuls or cups of water to make up the food. A tablespoonful or a cup is not a proper measure in infant feeding. The food should be measured in exact ounces.

The intervals of feeding may on general practical principles be as follows:

1. From 1 to 3 months old, every 2 hours; 10 to 8 feedings in 24 hours.
2. From 3 to 6 months old, every 3 hours; 7 feedings in 24 hours.
3. From 6 to 9 months old, every 3½ hours; 6 feedings in 24 hours.
4. From 9 to 12 months old, every 4 hours; 5 feedings in 24 hours.

Whether the baby is breast fed or bottle fed, the hours of feeding must be exact and regular. In some cases it is better to begin with three-hour feeding, at the age of two months. Care should be taken that the baby is through with the breast or bottle in about 20 minutes. If any food is left in the bottle after 20 minutes, it should be taken away and the baby made to wait till the next feeding, in order that time may be given for the food to digest before the next feeding. One night nursing or bottle feeding should be given before three months of age. After three months, the baby should go without food for six to eight hours at night. Failure in the proper habit of night feeding will result in great disturbance or sleepless nights to both mother and child.

The quantity of food in 24 hours is the most important factor in the infant's diet. From the entire quantity of food one can calculate in calories the food value the baby is receiving in 24 hours. An average baby requires 100 calories per kilogram of body weight, or 45 calories per pound. Younger infants and those who are underfed require a higher number of calories. The quantity of food in 24 hours necessary for a particular infant is easily obtained by multiplying the quantity at each feeding by the number of feedings in 24 hours.

To modify cow's milk and make it suitable for the infant's digestive powers, I make use of the following four methods:

1. Simple dilutions of whole milk.
2. Dilutions of top milk.
3. Percentage feeding.
4. Feeding with humanized milk.

For the general practitioner, dilutions of whole milk is the easiest and simplest way and can be successfully used in a large number of cases. But whatever method of dilution or modification one uses, the milk must be the best obtainable and must be prepared in the simplest way. In all feeding cases I use fresh certified raw milk, to which I add cooled boiled water and milk sugar, but nothing else; no lime water or cereal gruels. All that the baby wants is milk, sugar and water, and the nearer the food is made to correspond to human milk the better. After six months of age, orange juice, a well-cooked cereal, beef juice and zwieback should be given.

Having decided on the quantity of food the baby requires at each feeding, the number of feedings in 24 hours and the entire quantity of food necessary for the 24 hours, the proportion of milk and water, or the

strength of the food, is to be determined. There is no exact and definite rule about it. Proper judgment and experience is required in every case, but on general principles the food may be made up of one part milk to two parts of water, half milk and half water, two parts of milk and one part of water, or three parts of milk and one part of water. The age, weight and digestive ability of the baby will largely determine the strength of the food. Milk sugar should be added in the proportion of a tablespoonful to every ten ounces of food.

Dilutions of top milk may be used in some cases with good results, but the physician must know the exact percentage of fat in the upper 10, 15, 16, 20 and 25 ounces in order not to make the fat too high for the infant's digestion. Percentage feeding, though quite simple to the pediatricist, is somewhat complicated for the general practitioner.

Feeding with what I call humanized milk—that is, cow's milk with the percentage composition of human milk—has many advantages over the other methods of milk modifications, and can be used with benefit in a large number of healthy infants. Human milk is taken as the standard for this modification, and it is easy and simple in its preparation. The milk from the upper 15 ozs. of a quart bottle is used, to which is added an equal volume of water and the proper proportion of sugar. Having decided on the quantity of food the baby requires for 24 hours, half milk from the upper 15 ounces and half water, with milk sugar to make 7 per cent., will give a food equal in percentage composition to human milk, as I have shown more fully elsewhere.\*

222 East Broadway.

### UNDILUTED CITRATED MILK IN FEEDING OF INFANTS.

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Amsterdam, N. Y.

Some five years ago several articles appeared on this subject throughout this country and Europe. Up to the present time the profession has not supported the method in a way that would be expected, in view of the amount of reliable evidence before it. The chief reason is probably the honest prejudice that still exists over the question of casein. It requires some courage to order whole milk, when the mother, nurse, relatives, friends, and neighbors are totally against it, due to the fact they cannot understand the workings of the method.

Whole milk feeding has never claimed to prove successful in every case any more than any other food, and never in preference to breast feeding, but it is recommended when breast feeding fails.

According to Paynton, of London, by using citrate of soda, added to milk, sodium paracasein is produced; this in turn liberates citric acid which unites with the calcium. In this form it is absorbed. This method delays curdling of the casein, and when it does curd it is much finer than would occur if whole milk was administered without the addition of the citrate.

The milk must be freshly pasteurized. All the precautions as followed in any milk feeding should be carried out, such as clean bottles, clean nipples, and keeping the milk on ice when not in use. The milk should never be sweetened, the baby from the first becoming accustomed to the slightly salty taste of citrated milk.

The amount of sodium citrate to be used varies from one to two grains for each ounce of milk; many times

one grain per ounce will answer the purpose, while others require the full two grains. And then again there are cases which respond better to the proportion of one and one-half grains per ounce.

Next comes the question, exactly when can whole milk be started? If the feeding is started at birth it is much safer to start with a half and half dilution with barley water or boiled water. This is increased as rapidly as possible to whole milk, it rarely happening that one is unable to have the baby on whole milk at the end of three or four weeks. If the infant has reached one month or over before the feeding is instituted whole milk can be given at once.

The amount of milk allowed at each feeding depends on the child; some can take more than others, and expect and want more after the bath and on waking in the morning. A winter baby wants more than a summer one, but the latter requires more liquid. To fulfill this requirement boiled water should be given between the feedings. Oftentimes during the extreme hot weather of summer the milk has to be diluted, or the cream removed, or both, and the child carried along on this mixture until the hot weather is over. Regular feedings should be instituted and it is best to make the intervals between the feedings as long as possible.

In this form of feeding constipation must be avoided from the first, although many cases do not require more care than any other milk feeding. Liquid petrolatum has given satisfaction as a rule, and should be given in an appropriate dose.

This method of feeding is largely used to advantage in cases where proper directions for diluting milk cannot be carried out, whereby the children are forced to take comparatively poor milk. In these cases, treated by the citrated method, the children gain materially in nourishment and weight.

Mann, of London, uses this method in premature as well as full term infants with success. He also has noticed the benefits received in cases of rickets through its use.

Now and then one encounters a case that cannot successfully take citrated milk. These cases are unable to take diluted milk in any reasonable proportion, and some other kind of feeding has to be used.

248 E. Main St.

### Death of John B. Murphy.

Dr. John B. Murphy of Chicago, one of the world's greatest surgeons, died suddenly at Mackinac Island. Heart disease was the cause. Dr. Murphy had been in poor health for six months.

It is evident the doctor himself had not considered his condition a cause for uneasiness, for he had made arrangements to write a book on a branch of surgery during the fall.

Dr. Murphy had been associated with Mercy Hospital as member and chief of staff for many years, and it was at Mercy that some of his greatest work as a surgeon was performed. Dr. Murphy, who was a former president of the American Medical Association, was born in Appleton, Wis., 58 years ago. He was graduated from Rush in 1879 and his alma mater made him lecturer on surgery in 1884. He became in 1890 professor of surgery in the Post-Graduate Medical School, and two years later professor of clinical surgery in the College of Physicians and Surgeons.

Dr. Murphy devised the Murphy button and many other surgical devices and was noted for his daring plastic surgery. He received many honors for attainments in his profession. In 1902 the University of Notre Dame conferred on him the Laetare Medal. The University of Sheffield, Scotland, gave him the degree of Doctor of Science in 1908. On June 16, 1916, he received the Collar and Cross of the Order of St. Gregory the Great, at the direction of Pope Benedict XV.

Dr. Murphy was a voluminous contributor to surgical literature, was one of the founders of the American College of Surgery, and was easily one of the foremost of American surgeons.

\* *Medical Record*, May 29, 1915.



## CANCER OF THE RECTUM.

From the Surgical Clinic of

WILLIAM FRANCIS CAMPBELL, A.B., M.D., F.A.C.S.

PROFESSOR OF SURGERY, LONG ISLAND COLLEGE HOSPITAL.

Brooklyn, N. Y.

**The Problem:** The cancer problem is always interesting wherever we find it, but cancer of the intestinal tube presents a problem of supreme difficulty. There is not only the dyscrasia of cell proliferation to combat, but there is the subtle and progressive encroachment upon the integrity of the tube, and the necessity for interrupting and re-establishing the continuity of the tube in any radical extirpation. Thus it is obvious that we are called upon to eradicate the cancer bearing portion of the tube, and then to re-establish its vital integrity. All this requires the boldness, resourcefulness, and ingenuity which comes only from wide experience. We have long felt that the term "major" and "minor" surgery should be predicated upon a more rational basis than the mere extent of a lesion, or the depth of a lesion, or the time involved in its extirpation. Size, depth, operative facility are not the proper gauges of major and minor surgical work—the removal of an uncomplicated ovarian cystoma is a minor procedure when compared with the management of a septic infection of the thumb. The terms "major" and "minor" should receive their relative values as they affect the patient not the surgeon: Viewed from this angle, cancer of the intestinal tube is always formidable, and oftentimes baffling.

Our experience with cancer of the rectum has materially modified our earlier conceptions of this disease. It has led us to regard the more conservative procedures as the safest, and to be content with less ideal results than those brilliant but fruitless procedures which aim to restore the parts to the normal.

We regard that the golden rule is the rule that in the long run will give the best surgical results. "Operate on others the way you would be operated on yourself," and when you apply this to "cancer of the rectum," your enthusiasm for the brilliant procedures described by well-known authors will materially diminish, for you will realize that not in this way is the patient's game being played; the patient is lost in an effort to obtain the unattainable. Futile efforts to restore normal function after the functioning apparatus has been destroyed confers no permanent benefit upon the patient and sheds no glory upon the surgeon's art.

We again remark that cancer of the rectum is a problem for the experienced surgeon, not for the occasional surgeon. We concede that hemorrhoids may be treated by the family physician and treated successfully, but there are certain surgical procedures which should be entrusted only to surgical experts. The ordinary operator has no business to attempt the problems of gastric surgery or brain surgery—these are for specially trained men who are not only technically expert, but who have expert knowledge concerning the physiology and biology involved in the pathology, and in the effect of the reconstructive measures contemplated. This profounder knowledge of surgical principles than is involved in mere operative skill is just what is needed in solving such difficult problems as that presented by cancer of the rectum.

In studying our cases of cancer of the rectum we have been convinced of several important facts:

**First:** That no dependence is to be placed upon the "cancer period" of life in influencing our diagnosis of cancer of the rectum, as is demonstrated in the following patients:

**Case I.** A Medical student twenty years old entered the hospital complaining of alternate constipation and diarrhoea; straining at stool; occasional blood in stool; tenesmus. He was well until six months ago when he first noticed discomfort in the rectum. He also suffers from chronic indigestion, and has lost fifteen pounds.

This patient was operated and a very extensive carcinoma involving the bladder demonstrated.

We were content to do only a colostomy. A few weeks later the patient died.

**Case II.** Male, twenty-three years old, comes to the hospital complaining of an "abscess" of the rectum. There is pain on defecation and he has noticed a discharge of "blood and matter." Upon examination we found a hard annular mass about three inches from the anus which admitted the tip of the index finger.

This patient was subsequently operated by the abdomino-perineal method and is without recurrence for two years. These cases illustrate the unreliability of placing the "cancer period" within certain well defined decades. I think that I am not alone in the observation that cancer of the rectum shows less conformity to the incident of "old age" than cancer occurring in any other region.

**Second:** It is necessary to be particularly careful about a diagnosis of "hemorrhoids" specially at the cancer period of life until it has been verified by careful local examination—*sight as well as touch*. There have been some very embarrassing surprises happen to some of us when we have been content to take the patient's diagnosis or even the family physician's diagnosis of "piles."

The early symptoms of cancer of the rectum are altogether indefinite and resemble the symptoms of hemorrhoids. Slight discomfort in the rectum, a little bleeding occasionally at stool—these are about all the tangible symptoms of very early rectal cancer, and it is not to be wondered at that patients with early carcinoma of the rectum make their own diagnosis of piles, or that the family physician without examination takes the patient's diagnosis and thus the patient comes to the surgeon either of their own accord or sent by the family physician for the distinct purpose of having their hemorrhoids removed; and many a surgeon who has been satisfied with the family physician's diagnosis has been surprised at the operating table to find a rectal cancer. The following case is illustrative:

**Case II.** Female, fifty-two years old, was sent to the hospital by the family physician for the purpose of having her hemorrhoids removed. It was further arranged that the patient in order to save time should be prepared for operation by the family physician and enter the hospital on the morning of the day of operation.

This case was scheduled among several others for the regular Saturday afternoon clinic. In the pressure of work no examination was made either by the Resident Surgeon or the Operating Surgeon. It was a simple case of hemorrhoids, it was placed at the end of a long list of operations and all was well.

At operation an annular cancer was demonstrated about two and a half inches from the anus. A low operation was done and the patient made an excellent recovery.

At the end of a year there was recurrence and an abdomino-perineal operation was performed. No recurrence for eighteen months.

These surprises are not only embarrassing, they are inexcusable. Examine every case presenting rectal symptoms not only by touch but by sight. The examin-



ing finger should always be followed by the proctoscope with the patient in the "knee-chest" position.

**Third:** While the diagnosis of cancer of the rectum is usually late, yet the cancer remains local for a long time, and much can be done for the patient both curative if seen early, and even later in a palliative way.

**Fourth:** In all cases of cancer of the rectum, whether early or late a colostomy should be done. This is the least operation that all cases of rectal cancer demand; because:

1. Whatever method of extirpation is used, a preliminary colostomy should precede the major operation.

2. After colostomy, cancers of the rectum which seem hopeless often become much reduced, the patient's general health improves, and a radical operation is often possible later. The colostomy at once frees the ulcerating area from irritation and there is a subsidence of the surrounding inflammation.

**Fifth:** Cancer of the rectum should be treated surgically as cancer in other regions, not merely by local but by regional extirpation. It is impossible to cure cancer of the rectum by local operations which have no further concern than removing the part involved and attempting to restore normal function. Too much emphasis have been placed on the restoration of normal function, too little on the anatomical essentials in eradicating the regional lymph nodes.

Wherever the operation is inadequate the percentage of recurrences is high.

Note that in the low operation the percentage of recurrences was 68%. In the abdomino-perineal operation the percentage of recurrences was 18%. Could figures speak more eloquently for the thorough and rational operation rather than the local and inadequate extirpations? We must insist that cases of cancer of the rectum need just as thorough and radical an extirpation as cases of cancer of the breast; and that to satisfactorily accomplish this, the patient must be resigned to an abdominal anus, and the extirpation must be made by way of the abdomino-perineal route.

394 Clinton Ave.

#### ON THE NEED OF AN AMERICAN ASSOCIATION OF GENERAL PRACTITIONERS.

EDWIN A. SANBORN, M.D.,  
Somerville, Mass.

It will not do for the medical profession to slumber in fancied security in these revolutionary times. Unless the American Medical Association, backed by every state medical society, arises to the situation and takes the action needed to safeguard the constitutional rights of the physician and his clientele, all general practitioners and others in accord should band together, even if necessary dropping all their present ineffective affiliations.

Either the American Medical Association or the society whose founding I have tentatively proposed should regularly employ both national and state committees and attorneys to look after legislation. They should be well paid. Of course, this is all supposing that the rank and file of the profession are not content to be dominated, robbed and kicked about by hospital rings and political and commercial schemers, and to have their business interfered with and their clientele wrested from them by trick and artifice.

It is the constitutional right of every normal citizen to choose his medical attendant, and it is equally the physician's right to attend him in any and all circumstances, or at least to dominate such attendance.

What right has any person or organization saying to anyone: Accept such medical attention as I shall dictate or you must pay for it yourself (he ultimately does so anyhow), thus by undue influence and compulsion forcing him to consent to an arbitrary plan and conveying the idea both to the victim and the public that certain favorites are superior to the regular family physician? Later, if questioned, such dictators will say: The patient had his choice and consented to such attendance. Some of the district medical societies in Massachusetts are already moving to have the Workmen's Compensation Act amended so that the injured parties may select their own physicians without losing any of the benefits of the act.

The tactics to which I have alluded are in operation on the part of corporations, insurance companies and legislators. Absurd fee tables are also dictated. Under compulsory health insurance measures, when materialized, it is proposed to pursue similar methods. Are insurance companies and political and commercial schemers to be permitted to divert all the sick or injured away from their personally chosen family physicians into the hands of strangers, by intimidation, misrepresentation or other undue influences? How will the people like it when they understand it, and how will they fare?

Dr. Benedict says there are too many medical societies now. Very true—such as they are. If the many were superseded by one really efficient society, country-wide as it should be, and including in its membership every regularly licensed physician, of whatever school, whose interests are concerned in the ways noted by the writer, a vast change for the better would take place.

Political schemers become quite respectful to a body of men representing the strength of unity. Surely there can be unity along the lines proposed. We must wake up and stand together. Let us organize for the rights of ourselves and our patients and repel invaders of those rights. Let us enforce our right to instruct and advise our clientele in all matters pertaining to health and illness, and this unequivocally.

My proposal in the *Boston Medical and Surgical Journal* that we organize in the manner herein discussed has received a host of endorsements from physicians in many states. It seems to me that definite action depends largely upon the live and loyal medical journals.

24 Franklin Street.

#### The Deficiencies of Public Health Work.

How much remains to be done in public health work. How little has been accomplished. According to the Sage Foundation survey one-fifth of 219 cities of the United States having a population of more than 25,000 make no inspection of school children; one-third do not offer the ordinary laboratory diagnosis for the commoner communicable diseases; one-fourth make no effort to educate in health matters; nearly three-fourths have no housing law; nineteen-twentieths have no concern with the hygiene of industry; one-half have no proper organization to combat infant mortality, and more than three-quarters have no coherent program against tuberculosis. Seattle spends 98 cents an inhabitant each year in public health work; New York City 58 cents, and Woonsocket 4 cents. The minimum expenditure per capita should range from 50 cents to \$1, according to the size of the cities.

Only in very exceptional circumstances is it advisable to fix fragments of broken bones together by means of plates and screws while the wound is very foul.

## The Diagnostic Laboratory

Conducted by CHESTER T. STONE, M. D.,  
Brooklyn, N. Y.

### Microscopic Examination of Urine.

(Continued)

In severe nephritides the number of casts usually is very large, in the acute affections often larger than in the chronic. In healing of acute nephritis they often persist after the albuminuria has ceased.

**Diabetic Coma.**—The casts excreted in this condition are of great diagnostic significance. They not infrequently appear shortly before the attack, and constantly and often in large numbers during the coma in the form of short stumps of hyaline and dull glistening granular forms. Kulz first described them; these characteristic casts were never missed in coma. If the attack subsides (which, as is known, occurs in very few instances), the casts may rapidly and completely disappear. It is worthy of mention that even when large numbers of casts occur the albumin tests may show only a slight clouding of the urine.

**Cylindroids.**—While true urinary casts are only occasionally bifurcated or branched, faceted and fibrillated at the ends, and always present an unmistakable cylindrical form, there are occasionally observed flattened, ribbon-like formations which, because of a certain resemblance to casts, are deserving of mention. These, also, may be studded with many forms of finely granular elements. Uric acid or oxalate crystals frequently are deposited upon them. Their diagnostic significance is slight.

**Fibrin** is readily recognized by the distinct fibrin network which has already been referred to. The fibrin fibrillæ are most beautifully shown in the fortunately rare croupous coagula voided after use of too strong urethral injections. They are occasionally observed in colipylitic.

**Fat** occurs partly enclosed in fat-granule cells, partly free, and is easily recognized by its well-known optical and chemical peculiarities. Sometimes it is observed in form of innumerable minute globules, sometimes in large drops, especially in large white kidney. Large numbers of small and large fat-droplets are almost constantly found in chylous urine.

**Seminal Constituents** are observed especially in morning urine when discharge of semen has previously occurred as a result of spontaneous emission or of onanism or coitus. The spermatozoa often occur in the form of a quite dense white cloud flecked with small glistening puncta, and usually show certain variations in shape.

**Pigment.**—Derived from blood-coloring matter, it occurs usually as amorphous, fine and coarse granules, free or inclosed in cells. It is much less often observed in the form of hematoidin crystals and needles. It occurs abundantly in small and large clusters, or in slender and thick cylinders, in hemoglobinuria. This pigment is distinguished from the much rarer bilirubin by its insolubility in potassium hydrate.

Blood-corpuscle detritus in the form of droplets, clots and pigment casts occurs in hemoglobinuria.

After infarction a pigment similar to that in heart lesion cells of the sputum may occasionally be found.

**Differential Diagnosis of Pyelitis and Cystitis.**—According to G. Rosenfeld, in pyelitis the urine almost always is acid. It is important to employ fresh urine for determining the reaction. An axiom, he says, is: Nonacid urine does not belong to an uncomplicated pye-

litis. In some forms of cystitis; e.g., gonorrheal and tuberculous—the urine usually is acid, but, since the acid reaction is not considered in a positive sense, this is of no especial significance.

The pus corpuscles are either single, in shreds, or collected in spheric masses. The latter accompany any suppuration of a cavity connected with the uropoietic system. The shreds indicate that the pyuric process is located either in the urethra or is complicated with such. The form of the leucocytes is either round, crenated, or ragged, as though fixed during ameboid movement. These ragged nonmotile leucocytes are derived, according to Rosenfeld from the pelvis and speak in favor of pyelitis. The finding of round forms only does not exclude pyelitis, but directs attention rather to the existence of cystitis.

The red blood-corpuscles, when derived from the bladder, are well preserved (except vesical tumors); those from the renal pelvis are morphologically altered and partly or wholly deprived of coloring matter.

Only such masses of epithelia as are characterized by a bright nucleus, rounded forms, and a size not much larger than a white blood-corpuscle, and, perhaps, also one or two such epithelial cells if embedded in a cluster of leucocytes, can be regarded as coming from the renal pelvis. Large squamous cells have diagnostically nothing to do with vesical catarrh; the presence of large numbers of them and a few white corpuscles indicates leucorrhea and urethritis, but not cystitis.

Most important of all criteria is the ratio of albumin content to the amount of pus. This must be determined quantitatively. In cystitis, even in maximal amounts of pus, which make a sediment several centimeters in height, there is never albumin content of more than 0.1 to 0.15 per cent. In the urine of pyelitis, even with an amount of pus sufficient to form a deposit of but from 1 to 2 millimeters high, there will be found an amount of albumin equaling that observed in maximal degrees of cystitis, namely: 0.1 to 0.15 and more. In very large amounts of pus the albumin content is not often above 0.3 per cent., but the high albumin content in small and minute quantities of pus and an amount of albumin always exceeding that present in the maximal degrees of cystitis, is characteristic. The following scheme of four degrees is offered to express this ratio:

	Cystitis albumin (percentage)	Pyelitis albumin (percentage)
I. Maximum degree: Numerous pus-cells in liter glass.	0.1	0.3
II. Moderate degree: Pus-sediment about ½ centimeter high.	0.06	0.2
III. Slight degree: Pus-sediment 1 to 2 millimeters high.	Just distinctly recognizable.	0.1
IV. Minimum degree: Recognizable almost only by microscope.	almost Not recognizable.	Distinctly recognizable.

This table is only approximate. These rules are based upon practical experience and have been controlled and verified by clinical and anatomic observations.

**Summary:** Alkaline reaction is not found in uncomplicated pyelitis, and the limit of albumin content, even in maximal cystitis, is 0.1, at most 0.15 per cent.

If nearly all pus cells are ragged in contour, this speaks in favor of pyelitis.

If the erythrocytes present are principally chemically or morphologically disintegrated, this, only in microscopic hemorrhage, and in the absence of vesical tumor, pyelitis, indicates.

The characteristic symptom for diagnosis is the rela-



tion of albumin and pus according to the above scheme.—(Brook's Clin. Mic., 1916.)

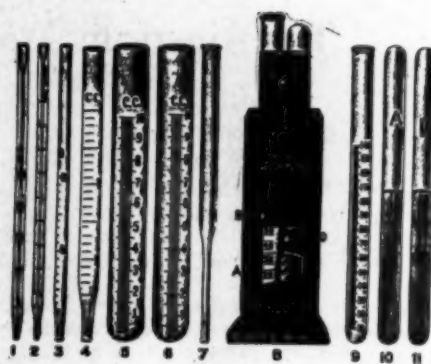
**Serology.—Agglutination Reaction with Normal Serum.**—Speaking of the *B. typhosus*, Ritchie says: (a) complete agglutination in a dilution of 1:16 should be looked on with considerable suspicion; (b) complete agglutination in a higher dilution (1:32 or above) should be looked on as diagnostic. *B. paratyphosus* A and B. Complete agglutination in a dilution 1:16 is suspicious, and in 1:32 or higher may be looked on as diagnostic. *B. dysenteriae* (Shiga). Complete agglutination in a dilution of 1:64 and above should be regarded as diagnostic. *B. dysenteriae* (Flexner). Complete agglutination in a dilution than 1:128 should be looked on as diagnostic, but in a dilution of 1:128 or lower it can not be relied on for diagnostic purposes. In the case of medical students, laboratory workers and the hospital class of the population, a larger percentage respond to the test in higher dilutions than do "normal" members of the population.—(*The Lancet*, June 24, pp. 1245-1286.)

**Urinalysis.—Glycuronic Acid in Infants' Urine.**—Barbier gives the simple quantitative test for glycuronic acid in the urine and the findings in infants before and after a dose of camphor. The children are grouped according as the findings are zero or near it, those showing a marked increase after the provocative dose of camphor, and those showing no change under the camphor. Weakly infants that are not thriving give the lowest response, but as their condition returns to normal the glycuronic acid content of the urine increases. It is thus a reliable index of what is going on in the body, as is illustrated by a number of charts. One child had an ascending curve until it was given cow's milk, when the glycuronuria abruptly declined. The milk was then stopped and the glycuronuria climbed up again, but dropped anew when the cow's milk was resumed, demonstrating that the child is unable to digest cow's milk. It modified at once the glycuronic acid output, and this in itself throws light on the symptoms of intolerance or intoxication observed under such conditions. As long as the glycuronic acid output is low, we can assume that the liver is not functioning normally, and we must refrain from making demands on it. Camphor seems to have a stimulating action on the liver functioning. Many of the atrophic infants improved materially under daily doses of camphor. The camphor thus serves diagnostic and therapeutic purposes. Among the five cases cited in detail is that of a six-week babe who gained only nine gm. for over five months, and the glycuronic acid output was very low. Then it was given camphorated oil daily, and in fifty days it averaged 17 gm. a day. When the glycuronic acid reaction has become normal the infant may be able to digest cow's milk, for which it has been entirely intolerant hitherto.—(*Archives de Medecin des Enfants*, Paris, May, XIX, No. 5, pp. 225-280.)

#### A Pocket Colorimeter.

An apparatus recently has been devised by Dr. Theodore Kuttner, with which numerous tests may be made at practically the cost of one outfit. The general practitioner is thus enabled to undertake many tests which heretofore necessitated sending specimens to a laboratory.

This apparatus, in which the tubes used in the Sahli-Gower hemoglobinometer are employed, is made by E. Leitz, New York, and consists of a closed upright box. At the top are two openings, one for the color tube, the other for the calibrated tube. Near the lower front part of the instrument is a window provided with a



small prism (Helmholz double plates), serving the purpose of having the colors of both tubes appear close together, forming a continuous color band. The prism is easily removed for cleaning and can be quickly re-adjusted. A sliding door, which can be raised and lowered, protects the prism from dust and injury. The color standard and calibrated tube are separated from each other by a partition, which prevents light from being reflected from one tube to the other.

The standard color tube is inserted into one of the openings and the sliding door raised until the window is exposed. The calibrated tube, with its contents ready to be examined, is inserted into the other openings and the diluting fluid added drop by drop and mixed until the color matches that of the standard. When this is accomplished the sliding door is raised enough to enable one to observe the height which the fluid has attained. The calibrated tube is graduated up to 140. In making readings, in order to obtain accuracy, it is best to read at that point at which the color just matches the standard and then, slowly continuing the dilution and taking other readings, accept as the final figure that one just previous to the point at which the color became fainter.

In most methods the reading so obtained is equivalent to that number of milligrams of the substances sought in 100 c.c. of the blood, urine, etc., tested. In order to obtain the result expressed in percentage it is necessary only to divide the obtained number of milligrams by 1,000, thus:

$$\frac{75 \text{ mgms}}{1000} = .075\%$$

The instrument should be held at a distance convenient to the eye of the observer.

Four pipettes are furnished with the instrument, and a complete set of directions for conducting the tests.

The apparatus is versatile in that it may be used to estimate: 1, hemoglobin; 2, carbon monoxid in the blood; 3, sugar in the blood; 4, phenolsulphonphthalein test. Additions are being made so that it soon will include also: 5, iron in the blood, serum, urine, etc.; 6, uric acid in the urine and blood; 7, creatinin; 8, creatin.—(*Jour. A. M. A.*, July 17, '15, Aug. 20, '16.)

67 Pierrepont Street.

#### Tuberculous Movement Increased 1600 Per Cent.

Statistics made public to-day by The National Association for the Study and Prevention of Tuberculosis show that nearly 3,000 agencies are now listed in the fight against tuberculosis in the United States, an increase of 1,600 per cent. since 1904, when the national warfare on this disease was started. These figures are taken from a new tuberculosis directory just issued by the association.

The list includes 557 sanatoria and hospitals, 158 tuberculosis boarding houses, 90 hospitals for the insane and 35 penal institutions making special provision for tuberculosis, 455 dispensaries, 310 open air schools, and 1,324 anti-tuberculosis associations and committees.

# The American Association of Clinical Research

JAMES KRAUSS, M. D., Permanent Secretary and Editor.

## Eighth Annual Meeting.

This meeting will be held in New York City, September 28, 29 and 30, 1916. The full program follows:

### Headquarters and Sessions:

Hotel Majestic, 72d Street and Central Park, New York. Reservations of rooms for members and friends at special rates.

### Clinics:

Flower, Metropolitan, and other Hospitals.

1. Call to order, Thursday, September 28, 10 A. M., at Hotel Majestic.
2. Introduction of the President and the Vice-President.
3. Opening Address by the President: "Important Discoveries in Medicine"—Daniel E. S. Coleman, M.D., New York.
4. Report of the Secretary and Treasurer.
5. Nomination and Election of Officers.
6. The Next Place of Meeting.
7. New Business.
8. Committee Reports: Research—Doctors Pearson, Rice, Askenstedt; Educational—Doctors Massey, Biedler, Blackmar; Journal—Doctors Hirshberg, Young, Conklin; Membership—Doctors Yale, Perkins, Griswold.
9. "The Scientific Attitude for Clinical Research"—James Krauss, M.D., Boston, Mass.
10. "Rational Versus Suggestive Psychotherapeutics"—Joseph A. Weitz, M.D., Montpelier, Ohio.
11. "The Eighth Nerve and Its Tracts"—Lantern Slides—George W. MacKenzie, M.D., Philadelphia.
12. "The Optic Nerve Tract and Connections"—A Review—Herbert D. Schenck, M.D., Brooklyn.
13. "Cerebral Roentgenology"—Lantern Slides—C. Winfield Perkins, M.D., New York.
14. "The Latest Results in X-Ray Work"—Jefferson D. Gibson, M.D., Denver, Col.
15. "Further Observations on Radium, Its Action and Adequate Dosage"—John Martin Craig, M.D., Philadelphia.
16. "The Use of Radium in Gynaecological Conditions"—Marshall Wm. McDuffie, M.D., New York.
17. "Appendicitis"—Spencer Carleton, M.D., New York.
18. "Local Anaesthesia in the Treatment of Rectal Diseases"—F. H. Williams, M.D., Boston, Mass.
19. "Ayurvedic Medicine and its History"—Sarat Chandra Ghose, M.D., Calcutta, India.
20. "The Scientific Study of Medicinal Substances, with Clinic at Flower Hospital"—Royal S. Copeland, M.D., New York.
21. "The Legislative Aspects of Public Education and Hygiene"—Roger M. Griswold, M.D., Kensington, Conn.
22. "Food versus Medicine in Relation to the Public Health"—Alfred W. McCann, B.A., New York.
23. "The Food Problem from the Chemical Standpoint"—William A. Pearson, Ph.D., Philadelphia.
24. "Cancer Research"—Clinical Observations—H. W. Nowell, M.D., Boston, Mass.
25. "Tobacco and Gymnastics"—Personal Observations—B. F. Roller, M.D., New York.
26. "Differential Diagnosis of Gall Bladder and Duodenal Disease"—J. Gutman, M.D., Brooklyn.
27. "Abdominal Adhesions"—Alonzo J. Shadman, M.D., Boston, Mass.

28. "Accurate Diagnosis of the Urologic Disturbances Encountered in Gynaecologic Practice"—Walter T. Dannreuther, M.D., New York.

29. "Blood Pressure"—Some Clinical Observations—F. C. Askenstedt, M.D., Louisville, Ky.

30. "The Surgical Kidney"—Personal Observations—Leon T. Ashcraft, M.D., Philadelphia.

31. "Sacro-Iliac Disease"—A New Method of Treatment—Curran Pope, M.D., Louisville, Ky.

32. "How to Apply Remedies," with Clinic at Metropolitan Hospital—Daniel E. S. Coleman, M.D., New York.

33. "Surgical Research," with Clinic at Metropolitan Hospital—William F. Honan, M.D., New York.

34. Other Papers.

35. Other Clinics.

36. Report of Executive Committee: Doctors Coleman, Griswold, Ashcraft, Krauss, Crothers.

37. Unfinished Business.

38. Banquet—Concert Hall, Hotel Majestic, Saturday, September 30, 1916, at 7 P. M.

Noted speakers will respond to the Toasts:

Bon Appétit.

Angels.

Welcome.

A Promise.

The Law.

Modern Medical Education.

The Blessings of Medicine.

Medical Fiats.

Food and Medicines.

The Spirit, not the Letter.

Uncle Sam.

Search and Research.

Reservations for the banquet by members and friends, both ladies and gentlemen, should be made at once by sending check, covering amount at the rate of \$2.50 per plate, to the President, Dr. Daniel E. S. Coleman, 101 West 78th Street, New York. Tickets will thus be assured and reservations held.

It is urged that all be present on Thursday morning, the 28th, prepared to respond to call. Other papers, the titles of which have not yet reached us, are to be read.

All legally qualified practitioners of medicine and surgery, in good moral and professional standing, may become members of this Association irrespective of their other medical affiliations.

Scientists are welcomed into membership.

Contributors, patrons, donors are welcomed into as sociate membership.

For applications for membership and other information, address the Permanent Secretary, James Krauss, M.D., 419 Boylston Street, Boston, Mass.

With morbus cordis, where the lungs are in a condition of congestion, a small amount of fluid may cause considerable dyspnea, especially when, as so often happens, the effusion is bilateral.

When a child has been fed on diluted cow's milk during the first fortnight of life, has never had breast milk at all, and there has been no attempt to imitate the colostrum period, there is usually an intolerance for cow's milk, and these cases are seldom suitable for whole-milk feeding.

Don't experiment with new dishes, since we have too many as it is, and, besides, muscular energy, mental vigor and nervous control, depend on simplicity and moderation, rather than superabundance and prodigality.

—MATTHEW WOODS.



# A FEW OBSERVATIONS ON CEREBRO-SPINAL FLUID IN POLIOMYELITIS.\*

JACOB DINER, M. D.,

PROFESSOR OF PHARMACOLOGY, TOXICOLOGY AND CLINICAL MICROSCOPY IN FORDHAM UNIVERSITY.

New York.

Hurwitz and Tranter in the *Archives of Internal Medicine*, Vol. 17, No. 6, report a series of examinations of cerebrospinal fluid and summarize their findings as to the reaction of normal fluid as follows:

"As determined colorimetrically, normal cerebrospinal fluid is more alkaline than blood, the difference in the hydrogen ion concentration of the dialysates of the two fluids being equal to 0.45, the value of pH for cerebrospinal fluid being 8.11. . . . Thus far no study has been made of the reaction of the cerebrospinal fluid in acute inflammatory conditions of the meninges. The demonstration that a change in the reaction does or does not occur would have an important bearing upon the value of hexamethylenamin as therapeutic agent in the prophylaxis and treatment of meningal infections."

The present epidemic of infantile paralysis in New York City and vicinity offered a good opportunity for the study of the reaction of the cerebrospinal fluid and I am submitting herewith a preliminary report on a few cases examined by me. The first question which I wished to answer was whether the fluid at the onset of disease, before treatment had been administered, differed in reaction from the normal as determined by Hurwitz and Tranter. For that purpose 5 cases were examined.

TABLE 1. Findings in cerebro-spinal fluid of untreated cases:

Case.	Age.	Appearance.	Pressure.	Sp. Gr.	pH.	Noguchi Butyric Acid	Copper Reduc-	No. of Cells
No. 1	15 mo.	clear	high	1010	7.2	#	#	180
No. 2	3 yrs.	clear	high	1006	7.	#	#	240
No. 3	2 yrs.	clear	high	1007	7.3	#	#	200
No. 4	1 yr.	clear	high	1011	7.	#	#	230
No. 5	16 mo.	clear	high	1008	7.1	#	#	220
Average				1008.5	7.12			214

All fluids came out under considerable pressure, all gave a positive Noguchi butyric acid test and all reduced copper fairly promptly. The cell count was high in all cases and while no differential count was made on a stained specimen the majority of the cells seemed to be of the mononuclear variety.

As it was not possible for me to obtain, at present, any more untreated cases I proceeded with the examination of the cases which had received Hexamethylen-tetramin. The amount of the drug given in each case was 5 grains every four hours (reported). The following is a summary of the findings:

TABLE 2.

No.	Age	Appearance	Pressure	Sp. G.	pH.	Noguchi Butyric Acid	Copper Reduc-	No. of Cells
1	17 yrs.	clear	high	1014	8.6	#	#	30
2	4 yrs.	clear	high	1008	7.6	#	#	110
3	6 yrs.	clear	high	1011	7.6	#	#	20
4	2 yrs.	clear	high	1011	7.75	#	#	70
5	20 mos.	clear	high	1010	7.75	#	#	45
6	3 yrs.	clear	high	1006	7.7	#	#	20
7	3 yrs.	clear	high	1009	7.6	#	#	60
8	3 yrs.	clear	high	1010	7.5	#	#	120
9	16 mos.	clear	high	1005	7.7	#	#	70
10	2 yrs.	clear	high	1012	7.65	#	#	40
11	18 mos.	clear	high	1009	7.5	#	#	140
12	2 yrs.	clear	high	1007	7.6	#	#	50
13	3 yrs.	clear	high	1008	7.6	#	#	20
14	2 yrs.	clear	high	1010	7.5	#	#	110
15	18 mos.	clear	high	1006	7.6	#	#	60
16	5 yrs.	clear	high	1009	7.7	#	#	30
17	4 yrs.	clear	high	1007	7.6	#	#	40
18	2 yrs.	clear	high	1007	7.5	#	#	50

\* From the Department of Clinical Pathology, Fordham University School of Medicine.

No.	Age	Appearance	Pressure	Sp. G.	pH.	Noguchi	Copper Reduc-	No. of Cells
19	1 yr.	clear	high	1008	7.5	#	#	100
20	16 mos.	clear	high	1012	7.65	#	#	20
21	19 mos.	clear	high	1006	7.6	#	#	30
22	2 yrs.	clear	high	1010	7.5	#	#	140
23	2 yrs.	clear	high	1007	7.6	#	#	80
24	1 yr.	clear	high	1008	7.5	#	#	60
25	3 yrs.	clear	high	1009	7.6	#	#	50

From the above I feel justified in drawing the following conclusions:

1. The cerebrospinal fluid in the cases examined, with one exception, that of case 1 (a negro), Table 2, averages pH 7.12 in untreated cases and pH 7.6 in those treated with hexamethylenamin.

2. In both treated and untreated cases it is lower than that of the normal fluid, as demonstrated by Hurwitz and Tranter.

3. The administration of hexamethylen-tetramin seems to reduce somewhat the acidity (or rather increases alkalinity) of the fluid.

4. The cell count appears to be reduced by the administration of the drug.

5. The acidity appears to stand in direct proportion to the number of cells present.

In all tests the fluid and not the dialysate was used. The method employed for the determination of the hydrogen in concentration was that suggested by Levy, Rowntree and McKim Marriott in the *Archives of Internal Medicine*, September, 1915, Vol. 16. The apparatus (colorimeter) used was that supplied by Messrs. Hynson, Westcott and Dunning of Baltimore.

In conclusion I wish to express my appreciation of the kindness and assistance given me by Dr. McDermott, resident-physician in charge of St. Mary's Hospital, Hoboken, N. J., and Drs. Blair and Conyers of the same institution.

316 W. 84th Street.

## Genito-Urinary Surgery

### Bleeding in Diseases of the Bladder.

David Newman of Glasgow presents a lucid explanation of this symptom:

(a) *Tumors of the Bladder*.—Hematuria is the cardinal symptom, and the one which first attracts the attention of the patient and leads him to seek advice. It may be present for a long time before pain is complained of, and by reason of the bleeding being unassociated with pain it is often allowed to go on without a sufficient regard to consequences. The belief that malignant disease is necessarily associated with pain has, unfortunately, got a firm hold of the professional mind as well as that of the public. The patient may be alarmed while the bleeding lasts, but when it stops and there is no pain he is willing to regard himself as cured by some drug he has taken. The bleeding recurs, and is again stopped by the same remedy, and again he is satisfied, whereas if pain was pronounced, as in stone in the bladder, the patient would seek advice and relief from his suffering. In this way the cause of the bleeding would be discovered early, and the surgeon would have an opportunity of rendering assistance. Too often, unfortunately, valuable time is allowed to pass, and the disease is permitted to extend beyond control.

Benign papilloma first shows its presence by hematuria in about 90 per cent. of the cases; carcinoma in about 70 per cent. In the great majority the bleeding is spontaneous; it progressively increases in frequency and amount; the urine is bright red and the blood may be mixed with clots. Instrumental manipulation increases the bleeding. The bleeding is often more profuse in simple papilloma than in carcinoma, and certainly appears at a much earlier stage of the disease, and not uncommonly fatal hemorrhage may rapidly ensue if the tumor is not removed.

#### (b) *Cystitis*:

1. *Septic*.—In acute cystitis the hemorrhage is not severe, although almost pure blood may escape at the end of the act of micturition; but in chronic inflammation with ulceration large

quantities of blood may be lost, and the blood is intimately mixed with a highly purulent and decomposing urine. Hematuria is not of so great diagnostic value as pyuria. It is important to observe the time at which the blood appears in the stream, and in order to do this it is necessary for the surgeon to see the patient urinate, and to observe whether the coloration is equal during the whole continuance of micturition, or is more abundant at the beginning or at the end of the act. The appearance of blood at the beginning of micturition, the remainder of the flow being clear, may be an indication of two distinct conditions—the disease is either in the prostate, close to the neck of the bladder, or there is a lesion in the urethra.

In simple solitary ulceration of the bladder the bleeding is intermittent in character, and closely resembles the bleeding met with in papilloma.

2. In *exfoliative cystitis* hemorrhage may be severe and prolonged in consequence of intense bacterial action on the mucosa. The acute stage of the disease is usually preceded by a chronic cystitis, which shows little tendency to improve under treatment. It is characterized by frequent micturition, tenesmus, severe pain at the end of the act, hematuria, generally terminal, but not always so, and occasionally the loss of blood may be considerable, and give rise to the suspicion of tumor. The capacity of the bladder is greatly reduced—to 2 or 3 ounces, or even less. The urine is cloudy, ammoniacal, and contains a large quantity of pus, some blood, and phosphates of lime. On cystoscopic examination the mucosa is seen to be greatly inflamed, covered with irregular masses of granulation tissue, coated with encrustations of phosphates which may form plaques, or the granulations may group themselves into little tumor-like masses topped with a covering of white spongy deposit. Around these plaques or tumor-like masses the mucous membrane is deeply injected, and the least injury causes bleeding.

3. *Syphilitic lesions* are rarely met with in the bladder, and when they do appear the lesions belong to the tertiary period. The ulceration is generally limited to the base and trigone, and is liable to be mistaken for a tuberculous lesion. The center of the ulcer is occupied by a greyish-yellow slough, the surface is irregular, the margins sharp and undermined, and surrounded by a deeply congested area.

4. *Tuberculosis* of the bladder is characterized by small bleedings, but as in the large majority of cases the cystitis is due to a descending infection from the kidney, it is impossible to ascertain how far the hematuria is due to the renal as distinguished from the vesical lesion.

In the earlier stages of secondary infection irregular patches of hyperemic mucous membrane are seen in the trigone or neighborhood of a ureter orifice, and are covered by greyish-white flakes partly loose, partly adherent to the eroded surface. In other areas there may be small ulcers, covered by sloughs, while the margins of the ulcer are deeply injected and of a bright red color.

In the more advanced cases of tuberculous disease the whole of the mucous membrane becomes thickened and more or less eroded, the ulceration is widespread, and the ulcers vary much in form and appearance.

(c) *Calculus* in the bladder gives rise to two symptoms, pain and bleeding, both of which are increased by movement and relieved by rest, and the blood is most abundant in the last portion of the urine passed. This last characteristic may be observed in cases of prostatic hypertrophy with erosion of the mucous membrane, but in these, in contra-distinction, exercise does not increase the pain and bleeding to any extent.

(d) *Enlarged prostate*, when uncomplicated by cystitis, vesical calculus, or ulceration, does not give rise to bleeding, except when the increased bulk of the gland has induced a varicose condition of the veins at the base and the neck of the bladder; but, as a consequence of this, profuse and repeated hemorrhage may occur, and sometimes it may be so severe as to demand immediate operation. In some lesions of the prostate the blood may pass into the urethra and accumulate there; on the other hand, in lesions of the first portion of the urethra the blood may flow backwards into the bladder and mix with its contents. When the blood originates in the urethra and accumulates there, or when it escapes from the prostate and flows into the urethra, the hematuria is limited to the beginning of micturition, but if the quantity of blood is great, and if it flows backward into the bladder and mixes with its contents, then the whole of the urine becomes more or less colored.

(e) *Varicose veins* in the trigone of the bladder may give rise to hematuria very similar to what is observed in vesical papilloma, but curiously it is a condition which has attracted very little attention from the urologist. The disease has been almost entirely overlooked. This could be easily understood in the days when the cystoscope was seldom employed, but now it is remarkable that hardly any cases have been published. Newman had a case in a man of 60. He had eleven distinct

hematurias in 18 months. The appearance of blood in the urine was the only symptom. On cystoscopic examination Newman found that on the base of the bladder there were three large varicose veins, but otherwise the bladder was strictly normal. This examination was made while there was no bleeding going on, and he advised another examination to be made during hematuria. A month later blood was seen slowly oozing from one of the distended veins. Newman learned that the patient when he did not get plenty of exercise was greatly troubled with constipation, and it was usually at those times that the bleedings occurred. Examination of the rectum revealed the presence of internal hemorrhoids. These were treated by cauterization, and since then the bowels have been carefully regulated, with the result that only on three occasions during the four following years a trace of blood was seen in the urine.

(f) *Diverticulum of the bladder* is sometimes marked by hemorrhages, and the loculi may be seen filled with blood clot. On these occasions the bleeding is due to the rupture of a varicose vein in the pouch. This condition is not common, although diverticulum of the bladder is frequently met with in urological practice.—(*Glasgow Med. Jour.*, Sept., 1915.)

### Venereal Disease.

W. F. Snow, New York, writes on public health measures in relation to venereal diseases. Syphilis and gonococcus infections are foremost, he says, among the group which may be considered as social as well as individual disorders and therefore to be attacked by social as well as medical treatment. They are communicable infections due to known organisms. Their methods of transmission are known, and a practical and laboratory diagnosis are both available. They are common throughout the world and everywhere are condemned as physically and morally harmful. Once contracted, he says, they may possibly progress to a practical recovery, but under present conditions a large percentage never recover or cease to infect and are a continuous menace to society. Syphilis in its early stages is especially a public danger, while in its later manifestations the menace is confined mainly to the individual. Gonorrhea, on the other hand, while a public danger at all times, is particularly damaging to the individual in its early development and later becomes an insidious danger to those intimately associated with him. With these general facts the medical attack is plain. We must seek co-operation with or control of the individual to prevent his infecting others. We must endeavor by education and administrative measures to protect others, and must develop as far as possible the defenses of society calculated to prevent the recrudescence of venereal diseases in any community.

The measures advocated for these purposes are (1) management of existing cases; (2) prophylactic measures; (3) measures aiding in their reduction and ultimate eradication. Under the first head, Snow advocates the provision of public health laboratory equipment for ascertaining the existence of the diseases, provision of ample facilities at public expense for clinical diagnosis and advice, provision for treatment of ambulatory cases to those requiring it (the proportion of the latter is considerable), provision of adequate free hospitals facilities, when necessary, for public safety, and extension of hospital social service work in this direction. The prophylactic measures recommended are compulsory notification of venereal disease, instruction of persons exposed in measures of protection of themselves and others, promotion of continence as the greatest factor in personal prophylaxis. Dissemination of general information in regard to these diseases and how they are transmitted, and utilization of approved medical prophylactic measures under adequate restriction and supervision.

The measures contributing to the reduction and an ultimate eradication are thus enumerated: 1, the repression of prostitution by law; 2, the provision of ample facilities for wholesome recreation and reduction of environmental and social conditions favoring extramarital sex relations; 3, the elimination of alcoholic drinks; 4, the promotion of sex education and general standards of personal conduct which are in keeping with high moral principles; 5, the encouragement of early marriage and promotion of economic conditions conducive thereto. All of these points and measures are explained and their values estimated and shown. Still other methods of controlling the evil noticed are the so-called eugenic laws, the examination of those handling foods, such as cooks and peddlers, etc. As matters of business policy are the physical examination of employees and the restriction of danger by confining infected individuals to safe occupations in this regard. Sterilization of infected individuals has been talked of, but this cannot be effective except in the way of preventing heredity, and is not to be advocated. Penalizing of infecting individuals is considered by Snow as in the same class, though it may be justified in armies or in barring cases from medical benefits in fraternal orders or for other reasons in narrow occupations.



### Pilimictia.

The fact of hair being passed with the urine has been noticed almost from time immemorial, and this rare phenomenon has, on account of its strangeness, so struck both physician and patient that it is easy to understand the diligence with which an explanation of it was sought in the past. That both Hippocrates and Galen had actually observed the emission of hairs with the urine cannot be doubted. Arnaldus in 1500 dedicated a chapter of his works to pilimictia, and spoke of "hairs mixed with fat and skin coming from the kidneys with the urine." Sculteius in 1658 and Klett in 1703 also wrote on the subject. It is now recognized that pilimictia is a phenomenon due to the rupture into the bladder of a dermoid cyst containing hair, and M. Carraro, in a recent number of *Il Morgagni*, has published a case of this kind which occurred in Milan. The patient, a woman of 40, and had suffered from dysuria, had a vesical calculus, which after extraction was found to be the size of a large nut, and was covered with hairs of from 1 to 2 cm. in length. For some time after the operation hairs were passed on micturition, covered more or less with calcareous matter, some being entirely free. Cystoscopy revealed a swelling with an irregular aperture at the posterior part of the bladder. Subsequently a cyst was removed by operation through the bladder about 6 cm. long and 10 cm. broad. It consisted of skin and pigmented hair, with enormously developed sweat glands, and showed evidence of marked inflammatory processes. The situation of the tumor almost in the median line suggested that it was a dermoid cyst which had developed in the paravesical tissue, but an ovarian or broad ligament origin could not be excluded without laparotomy.—(*Lancet*, August 7, 1915.)

### Hematuria, a Symptom.

David Newman, of the Glasgow Royal Infirmary, says that tumors of the kidney include among the commoner growths carcinoma, malignant papilloma, spindle-celled sarcoma, rounded sarcoma, and among the rarer ones angioma, benign papilloma, and epithelioma.

Early hematuria from tumor without a palpable swelling in the loin is very difficult to diagnose correctly, and in angioma and benign papilloma this sign is absent. In malignant disease, however, the most prominent feature of the disease is the increase in the size of the kidney. Albarran and Imbert, of Paris, found a swelling in the renal region in 71 per cent. of the cases.

Hematuria is the most important and significant symptom of malignant disease, especially cancer of the kidney, and tumors of the kidney are nearly always malignant. It is true various forms of fibromata have been recorded, and occasionally an osteoma, a lipoma, an adenoma, and cases of papilloma have been published from time to time, but they are very rare. In tumors of the kidney hematuria takes place in about 25 per cent. of cases in children; these are always, or almost always, sarcomata. In adults, about 20 per cent. of the cases of malignant disease present hematuria as a prominent symptom; these are divided between the sarcomata and the carcinomata. In carcinomata alone 75 per cent. of the cases present hematuria as a prominent symptom.

Hematuria of malignant disease is rarely severe at its early stage, although cases have been recorded in which profuse bleeding occurred at the onset of the disease. As a rule, however, it is only as the lesion advances that the loss of blood attains to such an amount as to form a distinct deposit. When the hemorrhage has once commenced it soon becomes profuse, is steadily progressive, is less transient than when due to other causes, and is generally spontaneous and continuous, although at intervals liable to aggravation. Clots frequently form, and may cause obstruction to the escape of urine through the ureter, bladder, or urethra.

When the tumor is limited to the substance of the organ, the urine is usually perfectly natural, but when the neoplasm has invaded the pelvis, blood-casts, epithelium, and portions of the growth may appear in the excretion. In the early stage of the disease, however, even before any abnormal constituent can be detected in the urine, the patient may experience considerable difficulty in micturition, probably the result of a reflex nervous excitement. In some cases of malignant disease the hematuria is a delayed symptom. This is especially so in cases of sarcomata. An enormous, soft, round-celled sarcoma may exist and develop without hematuria or any other disturbance in the secretion indicating the locality of the disease.

Pain is rarely a marked symptom in the early stages of disease of embryonic tumors. Imbert of Paris found pain present as the first symptom in 20 per cent. of the cases, and Watson and Cunningham "found it the initial symptom in 7 per cent. of the cases, and it was present during some stage of the disease in 20 per cent.; in 9 per cent. it was distinctly mentioned that pain was not present at any time during the course of the disease."—(*Glasgow Med. Jour.*, No. 9, 1915.)

## Diagnosis and Treatment

### Wassermann Reaction in Chronic Liver Diseases.

It has long been recognized that a positive Wassermann reaction may be yielded by the serum of a patient who has not had syphilis, but is suffering from such diseases as scarlet fever, leprosy, pellagra, yaws, and a few others. Drs. C. Verdozzi and L. Urbani include certain chronic disorders of the liver. They give a tabular and a detailed account of 26 patients with chronic hepatic affections in whom no history or signs of syphilitic infection could be obtained. An account is also given of 27 control cases, patients with either some acute disease of the liver or bile ducts, or with acute or chronic disease of some other organ, but free from any suspicion of syphilis. Not one of the 27 controls gave a positive Wassermann reaction. But a positive reaction was obtained in no fewer than 20 of the 26 patients with chronic hepatic disease. Nine of the 26 were suffering from primary or secondary new growths of the liver, and 8 of these gave a positive reaction; in 7 the reaction was complete. The remaining 17 had one or another form of cirrhosis of the liver, and a Wassermann reaction gave a positive result in 9 of these, while in 3 more there was fixation of the complement even in the absence of antigen. The authors remark that Boas failed to find a single positive reaction in 59 cachectic patients with malignant disease; possibly, they suppose, because the liver was little involved in these cases. The authors state that jaundice is not in itself a cause of a positive Wassermann reaction; jaundice was present in 13 of their 26 patients, and 6 of the 13 gave a negative reaction, as was also the case with all the 6 patients in the control series who were jaundiced. They note that the reaction was more often incomplete in hepatic cirrhosis than in the cases of hepatic neoplasm.—(*Brit. Med. Jour.*, Feb. 19, 1916.)

### Recent Studies of Diphtheria Carriers.

"The part which healthy carriers of diphtheria bacilli play in the spread of diphtheria has furnished a subject for much study and discussion. Numerous investigators have found culturally and morphologically," says *The Jour. A. M. A.*, "typical diphtheria bacilli in the throat and nose of from 1 to 4 per cent. of healthy persons. Zingher and Soletsky refer to Wilcox and Taylor as finding 4.5 per cent. of carriers among the scarlet fever patients admitted to the Willard Parker Hospital, and in one-half the bacteria were virulent.

"While diphtheria bacilli cultivated in cases of clinical diphtheria are practically always virulent, those grown from carriers are often nonvirulent. The general opinion of those who have studied the subject is that the avirulent diphtheria bacilli are harmless, that they never change into the virulent form, and that carriers of such organisms are not a source of danger. Many carriers of diphtheria bacilli rid themselves of the organisms in a short time, and it is only the persistent ones which are finally of most interest. Ruh, Miller and Perkins define a carrier as a person who harbors virulent diphtheria bacilli for a period of twenty-one days or more. While this limit is arbitrary, it establishes a time beyond which it is reasonable to undertake to determine whether a person who has become a persistent carrier harbors virulent bacilli or only harmless avirulent ones in order that needless isolation and restrictions may be avoided. This can be accomplished in an inexpensive manner by employing the technic of Van Riemsdijk or Zingher and Soletsky. In each case two guinea-pigs are used, one for the tests, and one, which has previously received diphtheria anti-toxin, as a control. Both pigs are inoculated intracutaneously with the culture to be tested. Van Riemsdijk introduces some of the culture on Loeffler's serum by means of a sharp, flat-pointed needle, while Zingher and Soletsky inject a suspension of the bacteria with a syringe. In each case virulent diphtheria bacilli cause a reaction at the point of inoculation in the test pig which is absent in the control. Two guinea-pigs can be used for testing from four to six cultures. After it has been determined which individuals are carriers of virulent bacilli and consequently a source of danger to others, the practical question arises as how to get rid of the bacteria. In trying to solve this problem a great number of antiseptic agents have been employed with the purpose of killing the bacteria. The latest addition to the list is iodized phenol, advocated by Ott and Roy. Hektoen and Rappaport advised the local use of kaolin to remove the bacilli mechanically from the nose and throat, and the recent report by Rappaport appears to show that the disappearance of bacilli can be hastened in this manner.

"No local measure has proved entirely satisfactory, a few cases always remaining in which the bacilli persist in spite of the treatment. A careful examination in such cases usually discloses some local condition which allows the bacteria to live and grow and which prevents their being reached by any appli-

cation. The most common condition of this sort is one in which there are deep pockets in the tonsils which are more or less enlarged and visibly diseased. Cultures from the throats in such cases often fail to contain diphtheria bacilli unless care is taken to secure materials from the depth of the tonsillar crypts. Friedberg has removed the tonsils in such cases with satisfactory results, the cultures becoming negative at once or very shortly. Similar favorable results from tonsillectomy have been reported by Ruh, Miller and Perkins. In the eighteen cases reported by them, positive cultures had been obtained over a period of thirty-one days on an average, in one over 120 days. Following the tonsillectomy, negative cultures were secured after seven days on an average, in several as early as the third day. There seem to be no contraindications to the operation aside from those obtaining in other conditions. Carriers of diphtheria bacilli are always immune to diphtheria, and in any case the presence of immunity can readily be determined by means of the Schick test.

"Local conditions in the nose and throat other than those in the tonsils may determine the persistence of bacilli, and should be sought in the individual case, and removed or relieved whenever possible. It seems likely that the employment of local measures of this sort will serve the very useful purpose of getting rid of a large number of persistent carriers which have heretofore been subject to various forms of local treatment without benefit."

### Bovine Tuberculosis in Man.

It has been proved experimentally that the general tuberculosis which can be produced by inoculation in certain young animals presents the same clinical features and the same pathological lesions whether the infecting material be obtained from a human or an animal source. Statistically it has been proved that tuberculous affections of the alimentary canal and its associated glands, especially the tonsils and the mesenteric glands, are most prevalent in early life and notably so during the years in which milk forms a large part of the diet. Comparing the death rate from the pulmonary with the general forms of the disease, it appears evident that there has been steady diminution in both during the past seven years, but that the decrease has been most marked in tuberculosis of the lungs. Examination of the figures recorded in Manchester, under the supervision of Professor Delpine, where the milk supply has been subject to careful control, goes to prove that the percentage of tubercle bacilli present in samples of mixed milk has been reduced in ten years from 17.2 to 5.14. A marked reduction in the death rate has been effected during the period in which control has been exercised, but it is probable that the bovine type of bacillus continues to be responsible for a large number of deaths from general tuberculosis.—(*Brit. Med. Jour.*)

### A New Method of Treatment in Asphyxia Neonatorum.

Restoration to life of an infant born in a condition of apparent death, which would in all probability become real without the prompt, skilful and patient aid of the medical attendant or midwife, if of peculiar importance at the present time when war is exterminating so many lives. We think, therefore, that the new method of resuscitation lately described by Dr. Serafino Marmo in a recent issue of the *Rassegna d'Ostetricia e Ginecologia* is of special interest. The operator is seated and holds the infant suspended in such a manner that the hollows of the axilla fit into the space left between the thumb and first finger. The thumbs encircling the shoulders from behind are extended forwards and upwards so that their radial margins and corresponding metacarpus support the head slightly, which otherwise would tend to dangle. The hollow of the hand and the four fingers turned forwards are placed lightly on the lateral and anterior regions of the foetal thorax, which is in this way completely supported. This constitutes the *inspiratory position*. The operator now spreads out his own arms so as to draw apart the shoulders of the child, which he raises quickly a few feet and then imparts to it a sharp downward vertical movement as if to throw it to the ground and suddenly arresting its descent. The air enters the rima glottidis with a characteristic hiss. These two movements occupy no more than two or three seconds and constitute the *mechanical and passive inspiration*. Then with the hollow of the hands and with the four fingers which surround the thorax, and which may be spread out if necessary, the operator exerts a cautious concentric pressure without disturbing the position of the foetus. He will experience under his hands a sensation of crepitus, which indicates the exit of air, and this movement constitutes the *mechanical and passive expiration*. These movements are practised 25 to 30 times a minute, and should be continued for a longer or shorter time according to circumstances. At intervals it may be necessary to put the child in a warm bath, although

the movements may be very well carried out with the child wrapped from the axilla downwards in warm flannel which can be changed from time to time.

Other useful effects are also obtained, such as traction on the larynx and trachea, with probable elevation of the epiglottis, widening of the rima glottidis, and depression of the lower jaw.—(*Lancet*, May 11.)

### A Self-Supporting Hospital.

J. Bayard Clark, of New York, believes hospitals can be built which will be self-supporting. He says the foundation principle upon which this form of hospital rests is that it must support itself by a fair exchange for the services it renders. It must be established by an investment of money and not by gifts of money. It must assume a responsibility such as any incorporated body assumes to those who have invested interests at stake. It must stand or fall in accordance with the value of its own production.

The figures upon which this plan has been constructed show that such a hospital cannot only provide medical and surgical attention of the first quality at a cost which will come within the means of the self-supporting public, but that it will pay suitable salaries to its doctors and nurses and all other workers, and show a fair rate of interest on the investment as well.

The waste in our present system of applying medical and surgical knowledge and skill is enormous, and an important feature of this plan is simply providing a way through up-to-date business ability and economy by which that waste can be eliminated. It is planned that the two lower floors will be arranged in suites of doctors' offices with accompanying rooms for examination and treatment. Above, the building is provided with wards and single rooms and all other facilities of a perfectly equipped hospital. The maintenance of the institution will come largely from the office patients. The fee for the ordinary visit has been set at one dollar. For the first visit and for such special and laboratory examinations as are necessary an extra charge will be made. For patients occupying ward beds there will be a charge of one to two dollars a day—for single rooms two to three dollars a day. There will be a charge of one dollar for each visit of the attending physician in the case of medical patients. Surgical patients will pay a reasonable operation charge which will include their after care.

It will be seen that patients will be able to figure beforehand pretty nearly what their weekly expenses will be. This form of hospital when realized will have advantage all classes—the poor in the charity hospitals will have attention which is not divided between them and those who are not entitled to charity. The advantage to those who are well off is two-fold, for when their physicians are provided with some assured income from their work in self-supporting hospitals they will not need to charge such large fees in their private practice, and doctors who gain their daily experience in institutions which must survive on account of the quality of their own production will be better trained than those without this responsibility. The advantage to physicians will be very great, as no doctor in such an institution will be required to take care of more patients than he can give adequate attention to. Working in co-operation they will have at hand the advantage of all necessary consultation. The records which can be kept in this system will be accurate and of real value to science. Being recompensed for their services will leave their minds free for the interest of their profession, which means in reality the interest of the patient.

The Workmen's Compensation Law in the State of New York has created a demand for some sane and systematic form of medical and surgical pay service, which as yet has not been met.

It would seem as though the requirements of both employer and employee had found their exact solution in this plan of a self-maintaining hospital. At the present moment plans of adjustment are being considered by many charity hospitals of this city in order to determine if it will not be possible for them lawfully and ethically to provide medical and surgical service to injured workmen at the expense, as the law provides, of the employer. This is a difficult and awkward task to expect of institutions whose legal incorporation, freedom from taxation, and fundamental principle is based on an ideal of charity and mercy which seeks only to care for the sick and injured who are destitute of means with which to pay their way to medical attention. With characteristic devotion, however, to the cause of the injured and ill, these hospitals are doing their best to meet the situation and functionate in a sphere quite foreign to that for which they were put into existence. Hospitals of the self-supporting type would be able to save this necessity of digression, and at the same time give to the corporations an institution which they can meet on a business basis. Already some of the larger corporations which employ large numbers have considered the plan of building hospitals for their own workmen. The form of hospital here depicted would make this entirely unnecessary.—(*N. Y. State Jour. Med.*, July, 1916.)



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### What is the Causative Agent of Poliomyelitis?

About thirty-five years ago an epidemic of typhoid fever occurred in the city of Los Angeles. As is usual in such emergencies, the conjectures as to the cause of the epidemic were various and many. A solution of the matter was due to the good sense of Dr. Walter Lindley, then acting as health physician. Dr. Lindley caused a map of the city to be prepared and the locus of each case to be charted thereon. At that time the city was supplied with water from several sources. A careful study of the map revealed the fact that the cases, with one or two exceptions, occurred on the line of a single water supply. A house to house canvass led to nothing tangible, but an inspection of the acequia a few miles outside the city disclosed the source of the trouble. In a part of its course the acequia was open and unprotected. At one place, within a few feet of the water, a Mexican family had occupied an old adobe cabin. They were itinerant, and had stopped there because an adult member of the family was ill; one had died and another was in a dying condition when discovered. The rest of the story needs not be detailed; it has been told many times and in many places.

The moral—not quite so obvious—is quite as important. The graphic charting of loci enabled the health physician to search quickly and to investigate intelligently with but little loss of time and practically with neither waste nor misdirection of effort. To the system the credit should be given.

In the present emergency it is not an unjust criticism to assert that there have been both a waste and a misdirection of effort, for medical and sanitary science are confronted by a problem of many unknown quantities. The geographic locus of the source is unknown; the specific cause is unknown; the manner of infection or

contagion is unknown, and the carriers themselves are unknown. A heart-breaking prognosis constitutes our only certain knowledge.

Solution by elimination may be a slow method; it is often a final means; but almost always it is one of certainties. Perhaps in the present instance the graphic charting of loci may not lead to tangible results, but it surely will not mislead. There are the possibilities of water contamination by means of ice; of fruit and similar foodstuffs purveyed in a thousand shops; of contaminated milk; of infection by insects; and of infection by flying dust. There are sporadic causes in homes where children, who could not have been infected by contact with a human or a domestic animal carrier, have been stricken. Such cases point to one or another of the foregoing possibilities.

The milk question presents many possibilities; certainly it is a vital one. Fortunately, both the means and the machinery of investigation are already organized. If milk is the medium of infection, it is possible to trace it to the dairies that produce it and to the cows that yield it. If the milk is infected, the cows may also be infected—or they may not be. It is a problem to be solved. And if the cows are infected, what is the source of their infection? Does the infection come from food?—or from the bite of a skin-piercing insect?

Up to the present time, bacteriologists admit that the specific germ causing poliomyelitis has not been isolated or identified. Is the failure to isolate it due to the fact that it slips through germ filters? Is it possible that the germ may elude a high-power objective and a stain at the same time? When the commission of European bacteriologists and pathologists investigated the disease popularly known as "sleeping sickness" a germ was sought—but a parasite was finally discovered. Have bacteriologists sought parasites like plasmodia or trypanosomes—or unlike either—as diligently as they have sought germs?

The investigation of Doctors Rosenau and Brues have cast suspicion on the biting stable fly as a cause of the disease, and this pestiferous insect certainly has been indicted but not with certainty convicted. If conviction becomes a fact, however, the spread and transmission of infection is possible, along with one of two lines—or both of them. Milk may be a carrier; the dung element of flying street dust also may be a carrier. Who can say positively that either one is or is not? The driver who delivers milk and the grocer who slopes it out of a deep can with a long handled dipper may be a carrier. Who can say that either one is or is not?

No one can bring a charge of incompetency against the leading American bacteriologists, pathologists and sanitarians; they rank with the best in the world. But can it be said that our systems and methods of research are as well organized and co-ordinated as well as that, say, of Germany. When the British government invited co-operation in the investigation of sleeping sickness, a master hand effected an organized system of work. The result was a foregone conclusion. It was not the work of any one man's work, and it is doubtful if any one man working independently could have achieved the discovery. To organized and co-ordinated system the credit should be given.

### The American Society of General Practitioners.

It is amusing to note the howls going up in protest against the proposed American Society of General Practitioners. The men who are doing the howling are all specialists, of course. Why should there be so

much howling about a class of practitioners who are frequently alleged not to exist?

Since time immemorial the general practitioner, acting conscientiously and ethically, has referred suitable cases to the specialist. He has done this with the utmost consistency and regularity. He has always supposed, if he ever thought at all about the matter, that the specialist would be about the last man in the community to vilify him as incompetent, or worse. But now for some time the general practitioner has found himself the victim of the most offensive abuse, coming from the very men with whom he for so long sustained the most helpful relations. He has also noted the inauguration of pay clinics on the part of his erstwhile associates, and he has been grieved to find the institution of such clinics made the occasion for further attacks upon his competence and honesty.

So he has begun merely to think about the organization of a national society of general practitioners; merely to think about it, if you please, and yet a fearful howl floats toward the zenith. Dr. Benedict says he really mustn't think of such a thing.

Would it not seem that the vilifiers realize that their abuse and betrayal have been slightly premature, and that they are still bound by the old ethical obligations, which the general practitioner *has never even thought* of abrogating? Would it not seem that they are a bit rattled by the totally unexpected proposal which we have discussed, seeing clearly, as they do, the tremendous import of such a national organization at the hands of the many very able men who are proud to call themselves general practitioners? Why, otherwise, such a panic?

If the vilifiers have seen the light it may not become necessary for the association to take them in hand. Dr. Benedict says we really mustn't think of such things. Very well, Dr. Benedict; then certain people mustn't do certain things. Defensive and offensive alliance waits upon their behavior.

In any case, let the organization go on. We fancy that the mere organization will be sufficient to end the traducing of which we have grown sick, and against which we have been naively supposed to be defenceless. We should not, like our British brethren, wait until after we have been shamelessly exploited before founding a guild.

Such a guild, if organized now, would put us in the best possible position to deal summarily with the sociologists, philanthropists and legislators who are bent upon conscripting us to play parts in the screaming farce of palliative charity.

Preparedness is in the air.

#### The Real Import of Genius Plus or Minus Humor.

The true artist of any sort, and the genius, ought, if they possess a *genuine* sense of humor, to run less chance of insanity than other men. When you come to think of it, did you ever run across a paranoiac who had ever been endowed with the humor sense?

Before we go any further with this thesis we should like to call attention to the extreme rarity of the sense of humor. Wit is commonly mistaken for humor, and while it is true that wit may be genial and humorous and highly imaginative, most witty sallies are apt to be at the expense of somebody and to possess the rapier quality. The most familiar type of wit is the gentleman whose idea of the ludicrous relates to some butt, as we say. The good-nature is usually displayed by the butt, rather than the wit.

Now, humor always, it seems to us, involves good

nature. It does not usually involve cleverness, or much imagination, much less wit, in itself.

Swift was a great wit; but think of the savageness of the man's nature!

The point that we wish to make is that it is the possession of the sense of humor that is a saving grace. The genius who is always in deadly earnest is the genius who goes on the rocks. The genius is truly supernatural when, in addition to his great creative power, he possesses humor. We have gotten into the habit of associating genius with insanity and the abnormal, because so many of its exemplars have been impossible to live with. It is not the Shakespeares, but the Rousseaus, who break mentally.

It is entirely possible to possess an artistic temperament and a sense of humor at the same time. Cervantes is an instance.

Genius is the most precious of qualities, considered from the standpoint of human progress, whether conjoined with humor or not. But considered from the standpoint of the welfare of the individual genius himself, it is a decidedly dangerous endowment unless tempered by humor.

We need have no fear for the mental safety of those of our geniuses who possess a genuine sense of humor. It is safe to say that humor is not generally found in them, which accounts for the many wrecks.

To assume that genius in itself is closely related to insanity is an utterly false postulate. All depends upon the degree of general humanness, of which the most vital ingredient is humor.

Here we intend to risk an anti-climax by boldly declaring our disbelief in the long tradition which ascribes a high degree of the humor sense to that God-kissed people, the Irish. They are pre-eminently witty, but to what have most of their difficulties been due if not to the taking in deadly and unrelenting earnest of things which most people take rationally; that is to say, with the safety valve of humor in good working condition?

What of poor Roger Casement?

To every Irishman, says Henry W. Nevins, the cause for indignation stands near.

#### The Virtues of Alcohol.

At last we know what the matter is with some of our writers—perhaps most of them. They suffer from inhibitions which tyrannize over the creative impulses in their souls and prevent the release of the spirits which give wings to the soul. These inhibitions can be paralyzed by alcohol. So it is perfectly clear what course our artists must pursue if they would join the galaxy of the great.

John Koren, in his recent work on "Alcohol and Society," prepared for the National Committee for Mental Hygiene, admits that such use of alcohol, in small doses, may be desirable in the case of certain persons who are handicapped by their inhibitions. This is the latest work on alcoholism and represents the consensus of our best opinion on the subject of alcohol.

There is something in the idea. Let the prohibitionists rave.

We are reminded of something that Francis Grierson, the brilliant English essayist, once wrote. He likened Emerson's writings to a plot of ground sown with lilies and other white flowers, without perfume. "A few of Omar's perennial roses, and a little of his wine, would have given color and fragrance to the garden and some passion to his prose," for "pure wine sharpens the wit and gives power to the wings of genius."



There is a widely spread belief, sedulously cultivated by pedagogues, professional moralists and scientists, that alcohol never makes for an enhancement of efficiency. The teachings upon which such a belief is based emanate from scientists whose work has been carried on under circumstances not even remotely comparable to the conditions of life that interest us in this connection, not to speak of the inferences drawn from experiments upon certain of the lower animals.

If certain measurable results follow the use of alcohol in the case of individuals whose efforts when sober are unproductive, such results ought to be credited to the alcohol. Such results may be all out of proportion to the damage inflicted upon the human machine, in point of social value. In the case of the alcohol-inspired genius, like Robert Burns, we have to discount the physical harm done in favor of the tremendous social value of his work.

We have no means of determining what the efficiency of our alcohol-using laborers would have been had they never become addicted to the stuff. As a scientific proposition, we have to admit that had they remained sober their efficiency might have been less.

An enormous volume of business in Wall Street and other districts is done under the influence of alcohol, and done well. Anybody with eyes can see that. Its volume could hardly be greater. Consider our huge export business under war conditions. The alcoholism of our business men did not leave them unable to meet increased demands. It would seem that our able men find alcohol a facilitator of business because of its effects upon hampering inhibitions. We are by no means denying the fact that an undesirable physical toll is often paid. But our business men are a human and an efficient lot. All men are not brutalized by alcohol.

What is the secret of Charles Lamb's expansive geniality and complete humanness if not alcohol? True, he died of its effects; but who would have the hardihood to discount the tremendous literary results in his case, and in many others?

The anociative value of alcohol in diphtheritic and other forms of sepsis cannot be seriously questioned.

It does not appear to us that the findings of Dodge and Benedict on the psychological effects of alcohol (Proceedings Nat. Acad. Sc., 1915; from the Nutrition Laboratory of the Carnegie Institute) conflict seriously with our premises. They found no stimulation; we affirm none. They studied eye, patellar and speech reactions, muscular phenomena, memory, etc. General depression of the neuromuscular processes at all levels of the cerebrospinal system was noted. Memory and the free associations were only slightly affected. Granted, but the subjects were college graduates and alcoholic patients. Of course, no facilitations were noted. Their subjects, in other words, were not Swinburnes or Burnses in the saddle of Pegasus, nor captains of industry framing something up in the business world. Such experiments as these and those of Quensel, however valuable they may be, can hardly be said to have even a relative or partial application to our thesis. And the opinions of Lord Rectors, professional moralists, fanatics and academic owls are interesting, but not conclusive. The general findings of laboratory workers are not questioned; we accept them with particular reservations. In so far as they apply to many industrial workers, the generality of students, certain ex-Secretaries of State, some Secretaries of the Navy and our besotted proletariat, we do not advance the slightest quibble. And we advocate temperance.

The avalanche of testimony that has come down to us from remotest antiquity with respect to the release by alcohol of wit, humor, imaginative fantasies and creative impulses has little or no relation to experiments conducted by earnest scientists, not in the Mermaid Tavern, but in some standardized college, generally upon the standardized minds and bodies of most respectable gentlemen, and consisting in the administration not of Falernian wine, but of 30 c.c. doses of  $C_2H_6O$ .

J. B. Haycraft ("Darwinism and Race Progress," London, 1895) has shown that in our prohibition states the admissions to the insane asylums and poor houses have increased as the consumption of alcohol has diminished.

Do the small amounts of alcohol which the belligerent nations in Europe have found it necessary to allow soldiers on active service make for or against efficiency? Must we believe that these soldiers require alcohol because they are neuropathic and constitutionally inferior? It is interesting in this connection to recall that there has been but little insanity or nervous disease among the troops.

People in the grasp of our highly-gear'd civilization suffer from uncomfortable cenesthesia, which alcohol relieves. This relief, says Robert T. Morris, if wisely conducted, may allow a man to remain a better citizen than he otherwise would be. Unrelieved physical and psychic discomfort can hardly be said to make for efficiency. Alcohol is an antidote to the pressor toxins. Tom A. Williams has pointed out that the vascular dilatation produced by alcohol gives relief to the effects of such toxins, and that the very interference with appetite and digestion sometimes brought about by it occasions a starvation which gives the organism opportunity to adjust itself once more to a physiologic metabolic balance. He does not see how it will be possible to dispense with legal regulation of the freedom of recourse to alcoholic beverages until men have facilities for healthful recreation.

What is the use of making a mystery of our alcoholism so long as we are determined to muddle along under our frightful social system? How can our attempts to control alcoholism by force or persuasion be anything but futile, so long as we refuse to clean house from the bottom up?

What is the use of reaffirming in parrot-fashion, stupidly or dishonestly, that alcohol never, never makes for efficiency?

#### A New Contributing Editor.

Dr. John J. Kyle, of Los Angeles, Cal., has accepted an appointment to the board of contributing editors of the MEDICAL TIMES in the place of the late Dr. Nathan Jenks, of Detroit.

Dr. Kyle is one of the best known otologists and laryngologists in this country. He was for years professor of otology and laryngology in the Indiana University Medical School, and otologist and laryngologist to the Indianapolis City Hospital. He resigned those appointments and went to Los Angeles in October, 1913, and was made professor of otology and laryngology in the College of Physicians and Surgeons, University of Southern California, and otologist and laryngologist of the Los Angeles County Hospital.

Dr. Kyle is a member of the American Academy of Ophthalmology and Oto-Laryngology (one time President), and the American Otological, Laryngological and Rhinological Association, etc.

Dr. Kyle will, we anticipate, make a most valued addition to the editorial force.

## Miscellany

CONDUCTED BY ARTHUR C. JACOBSON, M. D.

### An Epidemic Which We Apparently Do Not Fear.

We suffer from a mania for legislative enactments. In the last five years a total of 62,250 laws have been passed in this country by Congress and state legislatures. Some one has said that about everything has been covered except the abolishing of sharp corners on dog biscuit. Strange, but the Citizens' Union, in damning the record of Assemblyman James C. Campbell, representing the Thirteenth District, New York county, cites against him the fact that in his fifth term he introduced but one bill.

The profession is particularly menaced by freak medical legislation, and has already suffered much.

### A Paradox.

How admirably fitted for the perils of childbirth—we did not say for motherhood—are some of our worst specimens of womanhood. There are many females of the beer-guzzling, imbecile and epileptic types for whom childbirth is an afternoon's diversion. They get up on the fifth day and are seemingly immune to infection. How is it that nature does not make such women badly adapted for childbirth? How is it that nature does not see to it that the woman best fitted for motherhood possesses a doubly fortified resistance?

Which makes one think of the wish of Omar Khayyam:

"Ah, Love, could you and I with Fate conspire  
To grasp the sorry scheme of things entire;  
Would we not shatter it to bits—and then  
Remould it nearer to the Heart's desire?"

### "Logic Is Logic."

The Health Department *Bulletin* reproduces, presumably with approval, the following remarks of a prominent opponent of the liquor interests:

"Married men spend more time in the saloon than do single men. Can it be that in many of these cases the home has failed to function? . . . It is very generally true that men fail to do their part in making the home what it should be from the social standpoint, and perhaps too much has been said about wives failing to make themselves and their homes more attractive, thus 'driving their poor husbands to drink!' But the fact remains, a careful study reveals, that about twice as many married men go to the saloon as do single men."

Clearly, the only way to do away with such a deplorable state of affairs is to abolish marriage.

### A New Line of Cleavage in Practice.

H. De Carle Woodcock makes an interesting suggestion: physicians and surgeons should cease to be in separate camps. The practitioner of the future should be a man who understands all about a disease or a limited group of diseases, so that the same man would be both physician and surgeon for his special organ. Thus a man who is a specialist for the stomach will be both physician and surgeon for the stomach, which is quite rational. Some ailments would require no surgery. In eye, ear and throat work it is already the rule for the physician to be the surgeon, and the physician who specialized on the eye and could not use the knife would be at a disadvantage in competing with the surgeon who could. The public has a direct way of thinking that the man who opens the stomach ought

to know what should be put into it and how to treat it under all conditions.

### Confusion Worse Confounded.

A smashing majority of middle-class people are said to be interested now in the freak cults. This has come about directly on the heels of our so-called medical education of the public. What has been the trouble? We started out with the avowed object of sharing our knowledge with the people; necessarily a false point of approach, for it would not be possible to share such knowledge, much less the insight and the points of view and principles of action growing out of a million subtle things assimilated in the course of arduous professional training and clinical experience. Naturally enough, the public concluded that we knew very little, and has proceeded accordingly.

There is a tendency on the part of medical men to confess little knowledge and therapeutic helplessness. This has come to be really an unfortunate pose. It is, in fact, a lie, for the well-educated and experienced physician is a far mightier magician than Merlin of old.

Our modesty and self-depreciation are grotesque and farcical and unaccountable, in the light of the god-like power that has come to us.

Yet we stand before the world like frightened school-boys, apologizing and craving mercy.

Is it any wonder that the people have taken us at our own valuation and have turned away to brazen pretenders?

### The Lurking Fallacy in Intelligence Tests.

One can conclude too much from the fact of retardation, as revealed by prevailing tests. Judged by such tests, Richard Brinsley Sheridan, Oliver Goldsmith and Rousseau would have fared badly. The late maturity of Rousseau is a particularly notable consideration. So retardation may mean merely slow but exceedingly sure development. There are all kinds of people in the world.

### A Good Word for a Quack.

Pomeroy, the noted New York quack, must have been a pretty good sort of a scout, as the boys say. He may be practising yet, for all we know. We understand that he was very conscientious about treating people whom he found suffering from such conditions as cancer. He referred such patients to surgeons, just as any practitioner would. So it was with any condition that he did not think he could cure or improve to the same degree as regular physicians. He declined to treat a great many who sought his aid.

Now, on the level, wasn't Pomeroy a better sort than some quite respectable folks we know?

### The Law of War.

The Law of War is that peace is a hiatus during which the working classes are permitted to recuperate just sufficiently from one war to support another.

### Exophthalmic Goiter Sign.

D. Riesman, Philadelphia, calls attention to a comparatively unknown sign in exophthalmic goiter, namely, a bruit heard with the stethoscope over the eye ball, synchronous with the heart beat. This was observed by him first two years ago, and at that time he was not aware of its having been noticed before by others. It has been described and recognized, however, by Schönfeld in one case, and also by Carrington and Drummond. It is strange, however, that the sign is not mentioned by systematic writers on the disease or in text books. It is not constant as it may be absent in typical cases. Riesman has noticed a similar sound several times in aortic insufficiency, which is not surprising since many of the vascular phenomena of the two affections are very similar.—(J. A. M. A.)



## Correspondence

### Infantile Paralysis.

To the Editor of THE MEDICAL TIMES:

Regarding my last communication on poliomyelitis, I have fed animals the same food the children had. Result, paralysis and death. Experiments were carried on in crude way for quick results in connection with Frank H. Wright, D. V. M.

In some cases food that was left on the table was fed to dogs; kittens were fed with foods with milk and sugar added; chickens and pigeons with the same food which was mouldy; to guinea pigs and rabbits mouldy food was fed and some mouldy food was put in water for them to drink.

Is there any relation between the paralysis of the animal and the paralysis of the human, when both animal and human have the same food? City, State and Federal health departments say not.

I would suggest to physicians that only freshly cooked or freshly heated foods be fed during damp weather until this plague is stamped out and further investigation made.

Rev. Father Dawson, professor of bacteriology and biology in St. John's College, Brooklyn, is now conducting scientific investigation of moulds, fungi, etc., and expects results in a few weeks. He may be able to produce the disease in horses and obtain a serum, as horses have suffered similar epidemics since 1813, according to the bulletin issued for the asking by the Treasury Department under caption of "Forage Poison."

L. P. A. MAGILLIGAN, M. D.

### The Poliomyelitis Epidemic.

The epidemic of acute poliomyelitis which is raging in New York and is also prevalent to a certain extent in thirty-one other States continues to exact a heavy toll of human life. In New York City there have been up to date about 8,000 cases, with over 1,800 deaths. In New York State, outside of the city, there have been over 1,500 cases and more than 200 deaths. New Jersey has had over 1,900 cases and Pennsylvania and Connecticut also have had many cases and the usual number of fatalities.

Among the other places where poliomyelitis has made itself manifest are:

Alabama—Birmingham.  
Arizona—Mesa.  
Arkansas—Little Rock County.  
California—Weed, San Francisco, Los Angeles.  
Colorado—Denver, Boulder City.  
Florida—Bradford.  
Georgia—Rome.  
Idaho—Idaho Falls.  
Illinois—Blue Island, Standard, Gibson City, Belleville, East St. Louis, Dalton City, Dixon, Granville, Chicago, Blend Carrier Mills, Duquaine, Kanakee, Chansi, Quincy, Freeport, Virden, Eureka, Marva, Decatur, near Cherry, near Oregon, Simpson, Collinsville, Dimock, Olive Br., Streator.  
Indiana—Evansville.  
Kansas—McPherson, Wellington, Cowley County, Fowler, Garden City.  
Kentucky—Louisville.  
Massachusetts—Boston, Haverhill, Lawrence, Lowell, New Bedford, Worcester.  
Michigan—Detroit.  
Minnesota—Bethel, St. Paul, Minneapolis, Rockville Township, St. Cloud, Lakeville Township, Burhamville, Jackson, Simpson County, Lawrence County.  
Missouri—St. Louis.  
Montana—Carbon County, Crow Indian Reservation, Great Falls, Bozeman, Helena, Billings.  
North Carolina—Newbern, Southport, Greensboro.  
Ohio—Cleveland, Toledo, Akron, Cincinnati, Columbus.  
Oregon—Lebanon, Union.  
Rhode Island—Newport, Providence.  
South Carolina—Spartanburg, Charleston, Columbia.  
Tennessee—Memphis.  
Texas—Edna, Galveston.  
Virginia—Luray, Ceresse, Lynchburg.  
Washington—Auburn.  
West Virginia—Monongahela County, Wood County, Taylor County.  
Wisconsin—West Bend, Menasha, Milwaukee.

Let the luxury of dining, if your aesthetic taste demands and must have it, be in the decorations rather than the multiplicity of dishes, that the eye may feast on flowers and finery as the appetite on viands.

—MATTHEW WOODS.

## The Physician's Library

**A Mechanistic View of War and Peace.** By George W. Crile, M. D. The Macmillan Co., 1915.

Crile adds his voice to the chorus on war, and, unlike most of the critics and philosophers, really enlightens us. After soldiers become seasoned with respect to the hardships of war, and steady under fire, the kinetic system becomes attuned wholly to the fight, instead of the flight, urge, and they actually enjoy orgies of killing, as in bayonet charges. All this is explainable on the basis of mechanistic processes in which activating substances derived from the adrenals, the thyroid and the liver play their parts. Hence we have a fling back in phylogeny. The action patterns of ontogeny, then become but shallow tracings upon the deep grooves of phylogeny, and the beast in the cultivated man stalks forth once again. In war man even to-day betrays at every turn that he is in reality a red-handed glutton whose phylogenetic action patterns are facilitated for the killing of his own species.

The brain of man, says Crile, may be likened to a moving-picture film running from birth to death. The pictures that become adequate stimuli produce action patterns, the responses of which to repetitions of the stimuli by which they were produced make up the conduct of the individual. In other words, man's action patterns reflect as in a mirror his environment, which is the mold that predetermines the man. War is at present a biological necessity, because our environment still dictates struggle. If a child grows up in a web of life which is warlike, warlike patterns are inevitable. We must alter this warlike environment by substituting action patterns of peace, or at least we must see that the latter predominate. How this can be brought about along evolutionary, educational lines, Crile clearly outlines.

This idea of Crile's recalls what Robert T. Morris has pointed out, namely, that in the conduct of war we enlist to the utmost our scientific resources, while scientific methods of preventing war are wholly unutilized.

Without wishing to wrap the good intentions of thinkers like Crile in a cold, wet blanket, and without intending to mitigate in the least the frightful facts about man's murderous instincts, we cannot but point out that according to Crile's own theory the fear and flight impulses must be opposed to the fight impulse if the kinetic system is to figure in our preventive efforts. Crile himself appears to realize this logical danger, for he says: "Struggle is a biological necessity, and even war is preferable to pusillanimous peace leading to degeneracy." If the glory of the bayonet charge is dilated upon by war promoters, Crile says we must parallel this picture in the minds of the young with a picture of the disembowelled victims. What would be the response of the kinetic system to this if not the fear impulse? What would be the result of this kind of teaching if not an intensification of that distorted egotism which postulates the preciousness and indispensableness of puerile man as the center of the universe and his relatively inconsequential life the especial concern of the gods? We should not fear to give up life itself for the vital, eternal principles that war sometimes places at stake. The Belgians, to their everlasting glory, did not quibble for a moment, and though their land was despoiled and their sacred places desecrated, the principles for which they fought have been revived in the minds of men.

ARTHUR C. JACOBSON.

**Alcohol: Its Influence on Mind and Body.** By Edwin F. Bowers, M. D. Cloth: 207 pages. New York: Edward J. Cloche, 1916.

The author shows that alcohol is a depressant and that it is a food only as arsenic and other poisons are foods.

He repudiates the therapeutic value of alcohol and says that it produces deficiency in health and length of life, in physical, mental and moral well-being. Bowers is a popular writer on medical topics and this work is in his best vein.

**Intestinal Irrigation.** By Alcinous B. Jamison, M. D. Published by the author at 43 West 45th Street, New York.

The author demonstrates the necessity of keeping the intestinal tract clean by flushing and irrigation, and his statements are founded on established physiological facts. He is a believer in cleaning out and keeping clean, and tells how to do so in an interesting way.

**Medical Clinics of Chicago.** Vol I, No. 6. May, 1916. Bimonthly. Philadelphia and London: W. B. Saunders Co., 1916.

This issue contains ten clinics by as many physicians. All are interesting, but one, which is at the moment of professional interest, is the Allen treatment of diabetes, by Hamburger.

**The Health, Care of the Growing Child, His Diet, Hygiene, Training, Development and Prevention of Disease.** By Louis Fischer, M. D., author of "The Health Care of the Baby," etc.; attending physician in charge of the babies' wards of Sydenham Hospital, and to the Willard Parker and Riverside Hospitals. 341 pages and 23 illustrations. New York and London: Funk & Wagnalls, 1915.

Dr. Fischer has an apt way of expressing himself in very simple language, readily understood by the intelligent mother. The volume not only is written entertainingly and instructively, but is particularly to be commended because it does not overstep the mark and attempt to make a pseudo-physician out of the reader. The most important points in the "health-care" of the children are detailed, but this does not include the instruction in the administration of drugs and treatment, often harmful, such as has filled other books dealing with the same subject.

The main object of the book, as stated in the preface, is to instruct and guide the intelligent mother when remote from her physician, or to advise her sufficiently in case of emergency until medical help is required or can be secured.

The volume is divided into five parts, which include general hygiene and development, nutrition, the diagnosis of various well-known diseases, and concludes with an appendix describing food recipes, simple local remedies, etc. A book such as this can be placed safely in the hands of any intelligent mother.

H. H.

**Diseases of the Nose and Throat.** By Algernon Coolidge, M. D., Professor of Laryngology in the Harvard Medical School. Cloth, \$1.50 net. 12 mo. of 360 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1915.

The book has been written with the idea of guiding the student in his clinical work by presenting to him a volume which would explain the more important details of examination, diagnosis and treatment.

The author does not aim to thoroughly cover the whole field of laryngology, but only to present a treatise which will be of value to the beginner. He has succeeded admirably in presenting a difficult subject in a simple manner.

H. H.

**1915 Collected Papers of the Mayo Clinic, Rochester, Minn.** Octavo of 983 pages, 286 illustrations. Cloth, \$6.00 net; half morocco, \$7.50 net. Philadelphia and London: W. B. Saunders Company, 1916.

Mrs. Maud H. Mellish has gathered together papers written by 37 members of the Mayo Clinic or of the Mayo Foundation of the University of Minnesota, and which were published in medical journals in 1915. Naturally they represent the last word in medical and surgical procedure, and their preservation is most essential. The articles are grouped under the headings: Alimentary canal; urogenital organs; ductless glands; head, trunk and extremities; technic; general papers.

**Gynecology and Pelvic Surgery.** By Roland E. Skeel, M. D., Associate Professor of Gynecology in Western Reserve University. Cloth, 680 pages. Illustrated. Philadelphia: P. Blakiston's Son & Co., 1916.

This book resembles others along the same line. It covers its field well, as it gives the opinions of many men, rather than those of the author. A good feature is book references for collateral reading.

**Surgical and Gynecological Nursing.** By E. M. Parker, M. D., and S. D. Breckenridge, M. D., of Providence Hospital, Washington. Cloth, 425 pages. Illustrated. Philadelphia and London: J. B. Lippincott Co., 1916.

Every surgeon and gynecologist should place a copy of this book in the hands of his operating room nurses. By its teachings they would make themselves invaluable. The book considers the subject from every angle and leaves little to be desired.

**Colon Hygiene.** By J. H. Kellogg, M. D., Superintendent of Battle Creek Sanitarium. Cloth, 400 pages. Battle Creek: Good Health Pub. Co., 1916.

This book contains an immense amount of useful information on the intestinal tract and its habits. The colon is discussed at great length and its physiology is carefully considered. The author believes every case of constipation is curable and in most instances without the aid of surgery. He lays down rules which will, if followed, bring about the desired results.

**Infections of the Hand.** By Allen B. Kanavel, M. D., Assistant Professor of Surgery, Northwestern University Medical School. Third edition, thoroughly revised. Cloth, 498 pages, with 161 illustrations. \$3.75, net. Philadelphia and New York: Lea & Febiger, 1916.

The third edition is better than its predecessors, which is

saying much. No physician who treats arm infections can afford to do without this scientific treatise on the surgical treatment of the suppurative processes of the arm, hand and fingers.

**Diseases of the Eye.** By George E. deSchweinitz, M. D., LL. D., Professor of Ophthalmology in the University of Pennsylvania. Eighth edition. Cloth, 754 pages, 386 text illustrations, and seven lithographic plates. \$6.00 net. Philadelphia and London: W. B. Saunders Company, 1916.

A critical review of this book would be like painting the lily. It will suffice to say that the seventh edition has been brought up to date by the addition of every new feature in ophthalmology and the volume has been reset, with many new illustrations added.

**Skin Cancer.** By Henry H. Hazen, M. D., Professor of Dermatology in Georgetown and Howard Universities, etc. Cloth, 251 pages. Illustrated. \$4.00. St. Louis: C. V. Mosby Co., 1916.

The increasing knowledge of cancer lends additional interest to this monograph. The author has collated his experiences as an independent investigator, together with those when working in association with Bloodgood & Gilchrist in Johns Hopkins. The result is a scientific exemplification of the pathology of epithelial neoplasms, which is a distinct addition to cancer literature.

**Fractures and Dislocations, With Special Reference to Their Pathology, Diagnosis and Treatment.** By Kellogg Speed, M. D., Associate in Surgery in Northwestern University. Cloth, 888 pages, with 656 engravings. \$6.00 net. Philadelphia and New York: Lea & Febiger, 1916.

This volume covers the entire range of fractures and dislocations from skull to metatarsals. The pathology of every form of osseous injury enters particularly into the author's conception of treatment, and this fact makes the book stand out as a thorough example of what books on this subject should be. Fracture pathology is illustrated by drawings made from x-ray pictures of cases. The author has exhibited the greatest patience, ingenuity and care in the preparation of a most valuable treatise.

**Rules for Recovery from Pulmonary Tuberculosis.** A Layman's Handbook on Treatment. By Lawason Brown, M. D., of Saranac Lake, N. Y. Second edition. Cloth: 184 pages, \$1.25 net. Philadelphia and New York: Lea & Febiger, 1916.

One of the late E. L. Trudeau's best known assistants lays down rules that every consumptive should know. This book in the hands of the most interested persons would, if its precepts were followed, add materially to the teachings of preventive medicine.

**Venesection.** By Walter F. Fulton, M. D. Cloth. 220 pages. Illustrated. \$2.50 net. Philadelphia: F. A. Davis Co., 1916.

The author gives his ideas on the value of venesection in disease. He considers various diseases in which blood-letting has been practiced with success and earnestly advocates it in many conditions as a curative agent of great potency.

**Progressive Medicine.** Vol. XIX, No. 2, June, 1916. Paper. 482 pages. \$6.00 per year. Philadelphia and London: Lea & Febiger, 1916.

The contents of this number include: "Hernia," William B. Coley; "Surgery of the Abdomen, Exclusive of Hernia," John C. A. Gerster; "Gynecology," John G. Clark; "Diseases of the Blood, Diathetic and Metabolic Diseases, Diseases of the Thyroid Gland, Spleen, Nutrition, and the Lymphatic System," Alfred Stengel; and "Ophthalmology," Edward Jackson.

**Normal and Operative Obstetrics.** By George P. Shears, M. D., of the New York Polyclinic. Cloth, 745 pages. \$6.00 net. Philadelphia and London: J. B. Lippincott Co., 1916.

In the belief that too many books on obstetrics are founded on too much theory and too little practice, the author has prepared with great care and exactness a treatise which considers obstetrics as observed by the practitioner. He has gone into his wide experience and set down many points trivial in themselves, but of great importance in the accouchement chamber. The result is a book which appeals on account of its simplicity and thoroughness and the value of which is greatly enhanced by many splendid original photographs.

**The Non-Surgical Treatment of Intestinal Stasis and Constipation.** By Robert H. Ferguson, M. D. Cloth. 109 pages. New York: E. R. Squibb & Sons, 1916.

A handy little book setting forth at length the various methods of treating constipation with liquid petrolatum and one well worthy of perusal.



# "ROCHE"

To the Medical Profession:

New York 1916

We would consider as a favor information of any case in which a higher price than the one current before the war is being charged for Digalen, Thiocol Tablets, Thiocol Syrup or Pantopon Roche (Pantopium Hydrochloricum).

Even of the few "Roche" specialties which have been temporarily exhausted we have sold every package to the last at exactly the same price as that current before the war, trusting that by so doing we would maintain the good-will of the physicians in the products until they again become available.

We ask for your co-operation in carrying through our policy of opposing every attempt at speculation at the expense of physician and patient.

The Hoffmann-La Roche Chemical Works.



## For Infants of any age

Mellin's Food

*4 level tablespoonfuls*

Water (boiled, then cooled)

*16 fluid ounces*

Give one to three ounces every hour or two, according to the age of the baby, continuing until stools lessen in number and improve in character.

Milk, preferably skimmed, may then be substituted for water—one ounce each day—until regular proportions of milk and water, adapted to the age of the baby, are reached.

### Death of Dr. John A. McCorkle.

Dr. John A. McCorkle, president of the Long Island College Hospital, Brooklyn, and for forty years a member of the teaching staff of the college, died of a complication of diseases on August 15.

He was a graduate of the University of Michigan in 1873, became an interne in Long Island College Hospital during the same year, and then located in Brooklyn. For many years Dr. McCorkle had been professor of the practice of medicine and head of the department of medicine in the college. He was one of Brooklyn's foremost physicians and citizens, and to his individual efforts are largely due the great \$2,000,000 plant now possessed by the hospital and college of which he was so long the head.

### Elie Metchnikoff.

Professor Elie Metchnikoff, the celebrated bacteriologist and supporter of the theory that human life may be prolonged through the taking of sour milk, died in Paris on July 15.

Elie Metchnikoff, who succeeded Pasteur as director of the institute which bears the latter's name, was born in 1884. He was not trained as a physician, but entered the realm of medicine by crossing the frontier of another branch of science. In early life he was a zoologist, devoting his time to a study of the lower forms of life on the Russian steppes and in the Mediterranean waters.

Metchnikoff received the Nobel prize for medicine (\$20,000) eight years ago and devoted the entire amount to the furtherance of his researches in longevity. All his ancestors died young and he himself believed he was about to die at the age of 52 when he was stricken by a malady usually fatal. From that time he determined to try to live long. He set to work to discover the causes of the body's wearing out and fought every destructive agent that he could discover. He found, he believed, that the introduction of beneficent bacilli into the system to destroy pernicious microbes would postpone old age indefinitely.

For himself Metchnikoff followed a strict regime and he was hearty and vigorous until a very short time before his death. To prevent contamination of the blood by intestinal poisons he used not only the lactic fluid of prepared milk but the sugar

of dates. He ate nothing that was not cooked; even his fruit was stewed. His breakfast regularly consisted of vegetable bouillon and weak tea, besides the draft of bacilli. At lunch and dinner he ate a little meat, freely of vegetables and always compote of fruit.

"Old age," said Metchnikoff four years ago, "is an illness, like any other, and is the result of intestinal decomposition. As every one knows, acids combat this decomposition. That is why housewives pour vinegar over meat when they want to keep it. We have to do the same with the digestive tubes."

"Therefore, we introduce into the system an acid-producing microbe, but this microbe which lives on sugar, does not find sufficient glucose in the intestines to enable it to carry on the fight against putrefaction, senility and death. As the sugar absorbed by the digestive organs is not enough I had to find a microbe capable of producing the sugar required for the sustenance of the good microbe."

Professor Metchnikoff expressed regret a few years ago that he had never visited the United States, but he dreaded the ocean voyage and that prevented him from taking the trip.

### Opening for Physicians.

The Municipal Civil Service Commission will receive applications for police surgeon and medical officer, Fire Department, during the month of September, 1916. The Commission is desirous of securing qualified candidates between the ages of 26 and 40 years, who are citizens of the United States and residents of the State of New York, having at least one year's internship in a general hospital and five years additional practice.

The duties of the position will be the care of members of police and fire departments under the rules and regulations of the respective commissioners. The subjects and weights of the examination are: Experience, 3; oral test, 2; technical examination, 5; consisting of three parts: Part I, medicine,  $\frac{1}{4}$ ; Part II, surgery,  $\frac{1}{4}$ ; Part III, prophylaxis, including sanitation, pathological work, bacteriological questions,  $\frac{1}{4}$ . Salary, \$3,500 per annum for part time work. There is also attached to this position half pension after twenty years of service. For further particulars apply to the Municipal Civil Service Commission, Municipal Building, New York City.

## That typhoid hemorrhage

might have been prevented  
by the timely use of our  
"Elixir Chloro-Calcium"

You well know that calcium chloride increases the blood's coagulability; and you have also noted the fact that when given, as ordinarily dispensed, it may, and usually does, seriously disturb the patient's stomach; that's why it is not used oftener that way.

"Elixir Chloro-Calcium S & D"—5 gr. of the c. p. salt to the fldrm.—  
never disturbs the patient's stomach.

A pithy pamphlet that tells other facts about it awaits your pleasure.

## SHARP & DOHME

since 1860

"Quality Products"

BALTIMORE—MARYLAND



## FOR THE HOT WEATHER FEEDING OF YOUNG INFANTS

the safest and most satisfactory substitute for mother's milk is Trommer Malt Soup. Unfortunately, too little attention has been paid in the past to the diastasic ferment and carbohydrates that are found in human milk and which play such an important part in infant nutrition. In fact, most artificial infant foods contain no diastase whatsoever. It is not surprising, therefore, that the use of these foods is so often followed by malnutrition.

To those who have realized, however, the importance of diastase in the artificial feeding of infants Trommer Malt Soup has solved the problem. Easily made with



## **TROMMER** **DIASTASIC MALT EXTRACT**

many a physician has learned during the past forty years to turn to this standard extract of malt when confronted by the necessity of providing a safe and suitable diet for infants denied their mother's milk.

The simplicity and convenience of the food thus produced not only make it especially appealing but it is so easily and quickly prepared that the amount required for each feeding can be made up as needed, thus avoiding the dangers of contamination that always menace the food that must be kept standing.

Babies placed on Trommer Malt Soup do splendidly and the gain in weight, vitality and strength leaves nothing to be desired. The effect on the alimentary canal is particularly gratifying and it is a notable fact that infants fed with this food are remarkably free from digestive disturbance. This naturally suggests the use of this food during the heated season, and summer diarrhea rarely afflicts infants thus nourished.

It is a fact of no little significance that medical men who once commence the use of Trommer Malt Extract in the modification of cows' milk rarely if ever return to any other food. The results obtained make it entirely unnecessary.

Send for valuable booklet on *The Use of Malt Soup in Infant Feeding.*

**THE TROMMER CO.,**

**Fremont, Ohio**

## LISTERINE

### In the treatment of Summer Complaints of Infants and Children

"The clinical basis of treatment is antiseptics and disinfection of the intestinal tract; not with a purpose to completely destroy the offending bacteria and their toxins, which we know to be neither possible nor necessary, but to assist the normal defenses of the body to gain the ascendancy."

"There are four principles of therapy which govern the treatment of these infections:

- "(a) To give the gastro-intestinal tract physiological rest."
- "(b) To remove as much as possible of the infective elements."
- "(c) To stimulate natural defenses."
- "(d) To reinforce these natural defenses with local antiseptics."

"By local antiseptics we can inhibit many of the pathogenic bacteria in the bowel before they enter the mucosa. The antiseptic agent must be selected with a view to certain requirements; for example, it must not be strongly acid. It must not coagulate mucin. It must not be astringent. It must be easily soluble and not upset osmotic conditions, and finally it must be non-irritant and non-toxic."

"Listerine answers to all these requirements and furnishes an ideal agent of local antiseptics in these cases. It has the additional advantage of being compatible with almost any other medicinal agent with which the physicians may desire to administer it."

The above is abstracted from a pamphlet entitled

#### "Acute Intestinal Infections of Children"

a copy of which we shall be pleased to send to physicians upon request

**Lambert Pharmacal Company,**

**2101 Locust St., St. Louis, Mo., U. S. A.**

### Battle Creek's Semi-Centennial.

In honor of the fiftieth anniversary of its founding, the Battle Creek Sanitarium will have a notable celebration on October 3, 4 and 5. The program includes a great banquet, receptions, athletic contests, industrial pageant, outdoor spectacle, reunion of former patients, and a series of conferences on sociological, eugenic, sanitary and medical subjects in which prominent speakers from all parts of the country will take part. The beginnings of the Sanitarium were humble. A two-story frame house in the outskirts of an obscure village, two physicians and one patient, comprised the tangible portion of what was called the Western Health Reform Institute. But the true riches of the establishment lay in the ideas on which it was based. These included the "water cure," diet and dress reform and other "simple life" measures for the physical welfare of man. These fifty years have seen as big a change in the methods of the Sanitarium as they have in its equipment of lands and buildings. The present great enterprise, with its imposing display of architecture, its marvelous apparatus for accurate diagnosis and the healing of the sick, its corps of skilled physicians, trained nurses and hundreds of other employees, its fame, which has spread to the four corners of the world—is merely the outgrowth of that modest "house by the side of the road."

After a decade of moderate success, the institution came under its present management. New policies, new methods and new principles were introduced. The old-time "water cure," which was a rub-of-thumb affair, was replaced by rational hydrotherapy. The newest developments of medical science were gradually added in the effort to create an institution that should show in practical operation all the resources of physiologic medicine. At the same time stress was laid on supplying all the comforts of a home and a hotel, in addition to facilities for the administration of baths of every description, electricity in its different forms, medical gymnastics and other rational agencies, with careful regulation of diet.

In 1902 fire destroyed the main building and hospital. In planning the present magnificent structure, advantage was taken not only of the experience gained in the conduct of this institution but of similar enterprises and hospitals in this country and in Europe. The main structure is 550 feet long, 50 feet wide and six stories high. There are three extensions in the rear. To make the place entirely fireproof, wood was eliminated everywhere save in the doors and window cases. A ventilating system supplies 150,000 cubic feet of fresh air per minute. The cost of the building and its equipment has been nearly two million dollars. An annex purchased five years ago has rooms for from 250 to 300 persons, and in addition there are several large dormitories and numerous cottages for patients and employees. At present there are about 1,000 guests, including those not receiving regular medical attention, while a force of about 1,700 persons is employed to care for them.

Last year a new surgical hospital was opened, embodying the latest and most scientific ideas in construction and equipment.

Being purely a charitable institution, and having no dividends to pay, the Sanitarium is able to make liberal expenditures for the indigent sick. In one recent year these amounted to over \$150,000, and the total sum for the half century has been over \$1,400,000. The total number of patients to date is over 104,000, this excluding guests not under a physician's care. At the present time the patronage is far in excess of that of any previous time.

### An Opportunity for Physicians.

The New York State Civil Service Commission calls attention to the opportunities offered to qualified physicians for appointment to positions on the medical service in State hospitals, prisons and charitable institutions.

Although the salaries offered seem to afford adequate compensation, the number passing the examinations has not been sufficient to meet the needs of the service. An examination was recently held for prison physician, salary \$2,000, but the number of competitors was very small and no one passed the examination. An examination for assistant physician in the prisons, salary \$1,500, held at the same time, produced only two eligibles. An examination for assistant physician in the State hospitals held January 22, 1916, produced eighteen eligibles, but the list was practically exhausted before July 1. Another examination was held July 15, but only eleven competitors were secured.

This position carries an initial salary of \$1,200 with maintenance, including quarters, board, laundry, etc., and the salary is automatically increased \$100 a year until \$1,600 is reached, when opportunity is offered for promotion to the next higher grade, senior assistant physician, at \$1,800 and maintenance.

The State Hospital Service really offers a career, as there is a regular line of promotion for the medical staff from assist-

ant physician to the position of superintendent.

Anyone interested in these examinations should write to the "State Civil Service Commission, Albany, N. Y.," for information.

### Syphilis in the Negro.

Dr. Walter G. Baetz contributes to the *Proceedings* of the Medical Association of the Isthmian Canal Zone (Vol. VII, Part I, Panama Canal Press, 1916) a valuable study of 500 consecutive cases of syphilis among colored canal laborers. He says that a question frequently asked by medical men visiting the tropics is: "Do you see all of the diseases we have in the temperate zones, and, if so, do these diseases in the tropical climate and native run the usual course of their temperate prototypes?" Dr. Baetz has failed to find among 20,000 medical admissions to the Ancon Hospital of tropical male negroes a case of acute articular rheumatism, scarlet fever or tabes dorsalis, and has observed only a single case of dementia paralytica in a negro of Indian type. On the other hand, certain syphilitic manifestations he finds much more frequent among tropical negroes than in Caucasians. The relative frequency of syphilitic manifestations expressed in percentages was as follows: Adenopathy, 88; genital chancre or scar, 65; arthritis, periostitis, exostoses, 60; cerebro-spinal lesions, 36; skin lesions, 28; cardio-vascular lesions, 10; gummata and visceral infiltrations, 5. Dr. Baetz finds that in the implantation of the treponema pallidum in the aorta and aortic valves the negro pays a heavy toll. Over 31 per cent. of cases showed some febrile movement. "Tertiary" yaws he regards as a charitable diagnosis of tertiary syphilis. Prognosis as regards recovery is bad in this class of ignorant and careless patients. "The permanently disabled remain behind as inmates of the chronic ward until relieved by death, while the relieved ones will return to their habitations to perpetuate and increase the disease."

### Why Attention to Surgical Lubrication Pays.

From the standpoint of results, certain lubricants are much more effective and useful than others. Thus if one lubricant is more slippery than another, it means the easier and infinitely less painful passing of the sound or catheter. This not only enables the physician to accomplish his purpose more satisfactorily to himself, but in a way that naturally appeals to the patient and convinces him of his physician's skill.

Again, a non-greasy, water-soluble lubricant means non-interference with the effect of subsequent urethral medication or irrigation, so that the physician is able to obtain results that are impossible if he uses a grease that obviously prevents the proper application of local remedies.

In using the cystoscope, furthermore, greasy substances are highly objectionable since they have a most annoying way of clouding the lens and blurring and distorting the field. But a transparent, non-greasy lubricant not only permits the instrument to be passed with less pain and discomfort to the patient, but without making matters more difficult for the examiner by fogging his lens.

Patients of discriminating habits dislike to have their linen stained or soiled with a greasy, unclean looking lubricant, particularly if it can be avoided—and it surely can if a lubricant is used that is non-greasy and free from substances that stain or discolor.

It is by attention to the little things that many earnest, pains-taking medical men not only obtain better results, but in addition win the gratitude and "good will" of their patients. It is this gratitude and "good will" that lighten the physician's every day labors and reconcile him to the trials and tribulations of medical practice. Also here is the only "ethical" way the doctor has at his command to gain patients. "Good will" pays. And it pays to use anything that will contribute to that good will.\*

### The Autobiography of an Ampoule.

In "The Ambulations of A. N. Ampoule" the subject of the autobiography claims to be something of a philosopher—in fact, "a precocious child." One can well imagine the "aching void of an empty ampoule's stomach," and perhaps realize in a degree the size that his head seemed to be shortly after it was formed in the blaze of a Bunsen burner. Throughout the little story runs a serious vein, which offers to the reader an explanation in a brief and non-technical manner of the many processes through which the ampoule passes in its preparation for the physician's or surgeon's use. A copy will gladly be sent to any physician from any branch of the Intravenous Products Company.

\*Do you know "K-Y" Lubricating Jelly? If not, write for a sample. Van Horn & Sawtell, 15-17 East 40th Street, New York City.